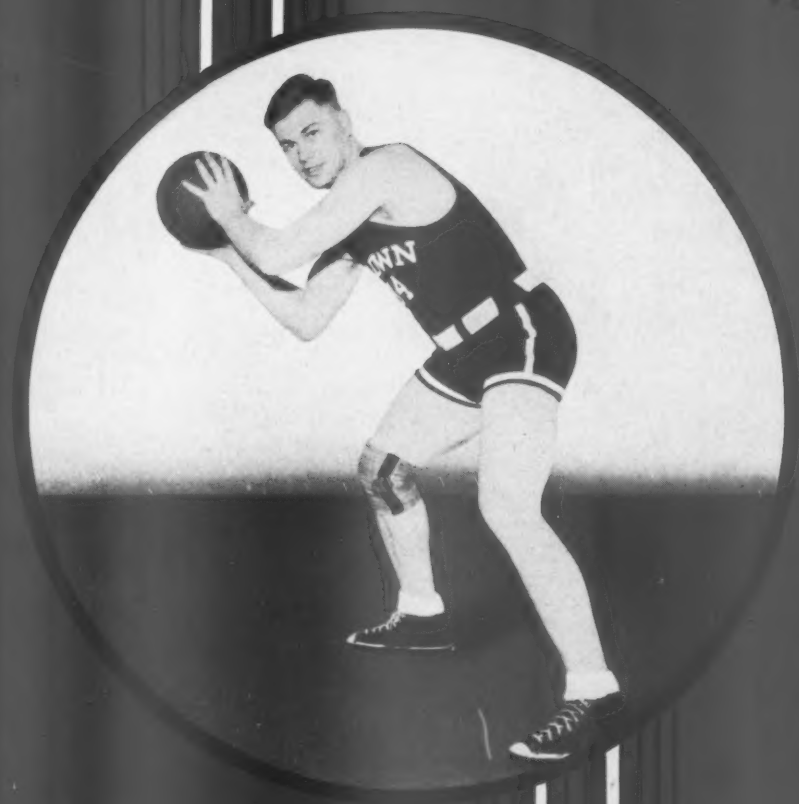


ATHLETIC JOURNAL

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January, 1937



The Springfield Figure 8 Offense

Edward J. Hickox

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Offensive Basketball with the Elimination of the Tip-Off

J. M. Barry

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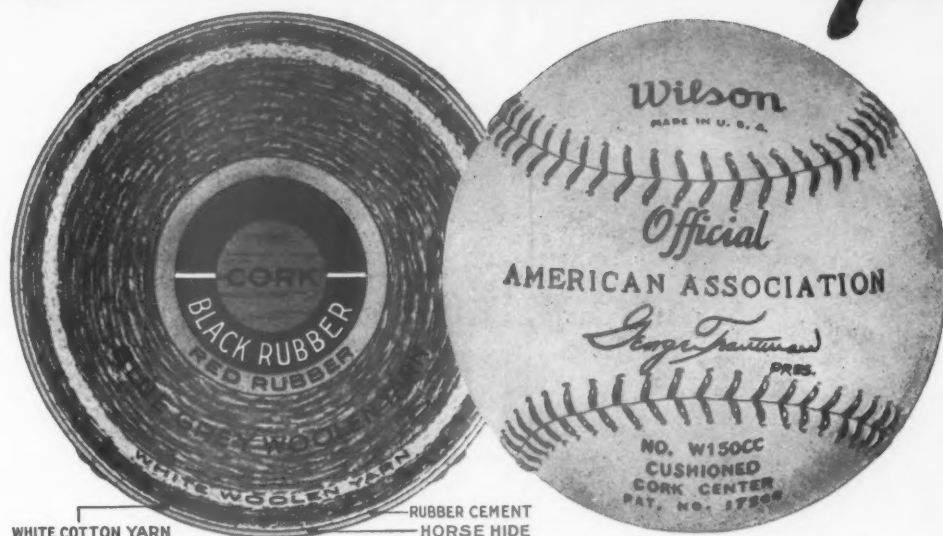
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CONTENTS

for January, 1937

PAGE

5	The Springfield Figure 8 Offense.....	Edward J. Hickox
8	Possibilities of Single and Double Pivot Plays.....	Ward L. Lambert
9	Offensive Basketball with the Elimination of the Tip-Off.....	J. M. Barry
10	Offensive Set Plays in Basketball.....	Everett N. Case
12	Center Play in Ice Hockey.....	Westcott E. S. Moulton
15	Continuity Screen Play in Basketball.....	Ben Neff
16	Basketball Theory, System and Style.....	Frank Lindley
18	Strategy in Amateur Wrestling.....	Richard K. Cole
24	The School Administrator Views Athletics.....	A. L. Richter
26	Basketball Ethics.....	Raymond W. Hanson
27	Chaos or Co-operation in Intercollegiate Athletics.....	R. L. Sackett
28	Scholastic Achievement and Physical Efficiency....	Winfield S. Angus
31	Athletic Diagnosis.....	Stewart A. Ferguson
34	A Junior High School Basketball.....	Edward J. Storey
34	New Book on Athletic Injuries	

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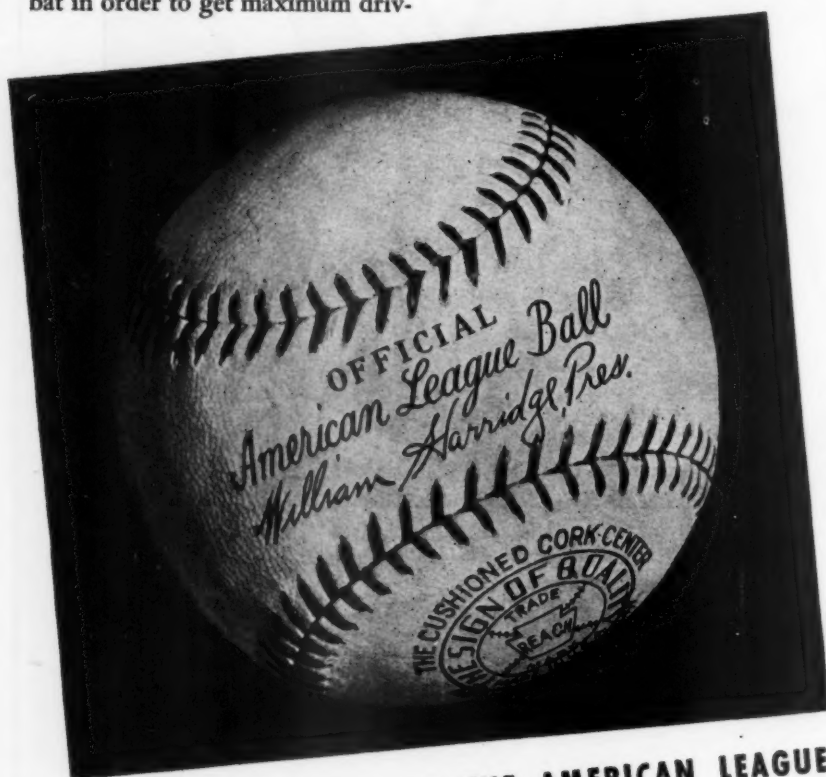
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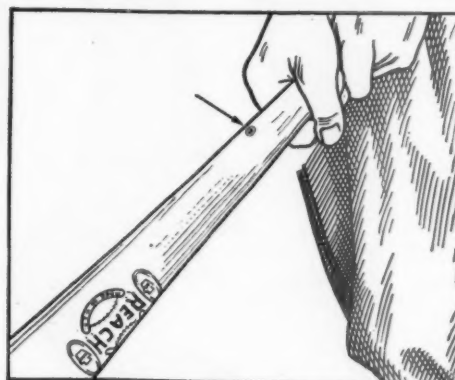
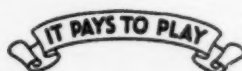
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2. When the bat swings back, the trade mark turns "in." As the bat swings forward, the trade mark turns "up."



3. As the bat meets the ball, it is parallel to the ground, with the edge of the grain forward, the trade mark "up," the wrist directly behind the blow. Result—a POWER DRIVE!

A free throw by Nuttall in a practice scrimmage of the Springfield College basketball squad. Nuttall shot eleven free throws out of eleven tries in one game last season and was given honorable mention on the "All-New England" mythical team.



The Springfield Figure 8 Offense

By Edward J. Hickox
Springfield College

THE type of basketball offense used by the writer grew out of an attempt to meet successfully a zone type of defense. It started in 1925 with a squad of freshmen, who were meeting this type of defense almost entirely. In 1927, the writer inherited the varsity and a team personnel made up largely of his former freshman teams. The success of these teams led to confidence in the style and to its adoption as a varsity system. Eight New England opponents used zone defensive tactics that first winter, and all fell victims. The drift to a man-for-man style among opponents was rapid, yet the general style of attack continued effective. At the end of the first three seasons only two opponents were using the zone defensive system, yet during that time the teams had won forty-four victories out of fifty-one contests.

Naturally the coach had learned a great deal from his boys about the merits and weaknesses of the system and the teaching procedures best adapted to grounding the players in it. He also learned to his discomfiture that material has more to do with team success than system. He lost his star red-headed pivoter and passer by graduation and finished the next season on the losing end of the schedule by several games.

Principles of the System

These preliminary remarks are meant merely as an introduction to the more descriptive or technical discussion of what has for many years been called the "Springfield figure 8 offense." Designed

originally to function best against a 3-2 zone, it has lived and so adjusted itself as to function successfully against the man-for-man defense. This would seem to indicate that it is in agreement with sound fundamental principles of basketball, however strange certain phases of it may appear.

The presentation of this style of attack is primarily in terms of adaptation to its original purpose—attack against the 3-2 zone. The succeeding changes, those made necessary by the man-to-man defense, are also noted.

When playing against a zone defense, it is well to have an organized system of penetration. The appearance of five men placed defensively in front of the goal often has a discouraging effect upon the attack, unless that attack has been drilled in some sound method of penetration. There are several methods of penetration

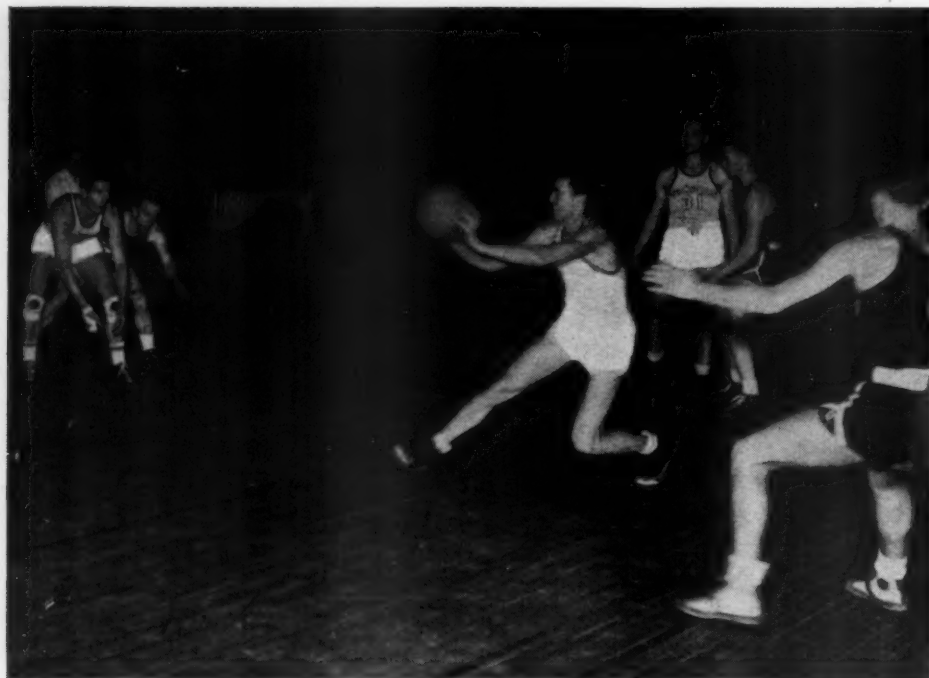
in use. The figure 8 offense is successful for penetrating the typical 3-2 zone, in which the two forwards and center comprise the first line and the guards the secondary line of defense.

The burden of the offense rests upon the shoulders of the two forwards and the center who naturally should be capable of carrying it. The guards aid in the offense to the extent of passing the ball through the primary defense and feeding it at the proper time to the offensive trio. Primarily the system is a three-man offense with both guards in an easy position to drive through, to shoot over the defense, or to drop back on defense upon loss of the ball. The system derives its name, "figure 8," from the action of the two forwards and the center who, in cutting for passes, form a figure 8, with the free throw line as the intersection point. See Diagram 1.

Specific Examples

Let us assume that the ball is taken off the opponent's backboard by one of the guards, X5 in Diagram 2, and that as this occurs the opponents immediately drop back into their zone defensive formation under the basket they are protecting. The guard, X5, then passes the ball to his center, X1, who is cutting forward for the pass. While this is occurring, the two forwards, X2 and X3, immediately dash down the floor, along opposite side lines to halt in their respective corners. The center makes a pass to X4, the guard on the opposite side of the floor, and then dashes down either side line to a point approxi-

BACK in the early '90's, basketball was an exclusive affair, with James Naismith the only coach and the International Y. M. C. A. College the only institution sponsoring the game. So good a sport could not long remain exclusive, however, and the game which originated at the International Y. M. C. A. College, now generally known as Springfield College, is played by millions of boys and young men in all parts of the world. At Springfield College now as Head Coach of Basketball is Edward J. Hickox. The figure 8 offense which he describes here differs from the five-man continuity used in many parts of the country.



The Springfield College team at practice. Captain Hebard has just received the ball at the free throw circle from Nuttall, the player in white at the left of the picture, and is passing to a guard (not in the picture) who has cut by Nuttall, using him for a screen, in a drive to the basket on what Coach Hickox calls his short side play. This is the reverse of the play shown in Diagram 7.

mately where the free throw line extended would intersect the side line. The two forwards and center are then in their proper positions for the start of the figure 8 offense. The ball is brought down the remainder of the way to the primary line of defense by the two attacking guards, either by a series of passes back and forth or by dribbling.

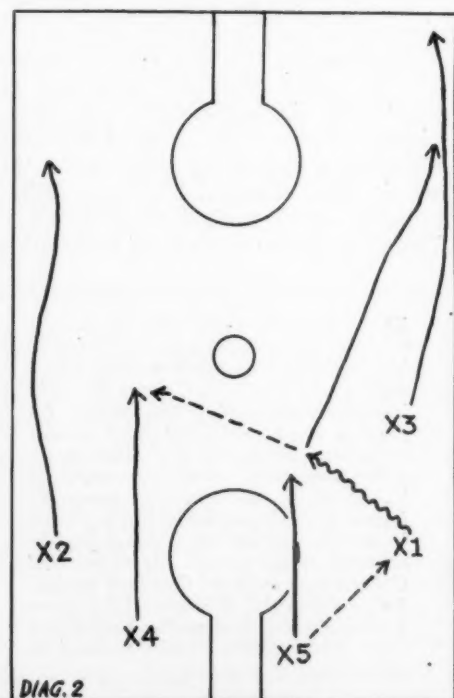
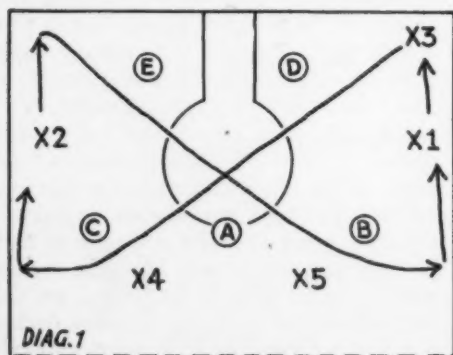
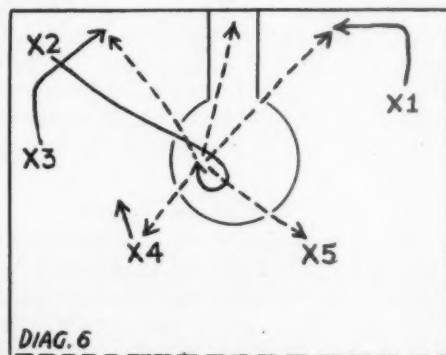
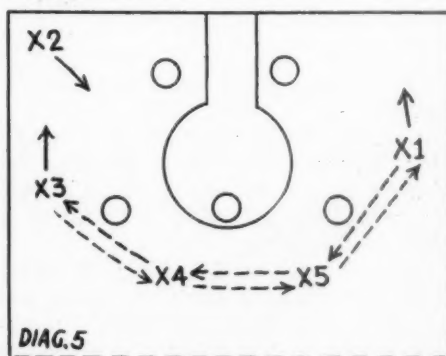
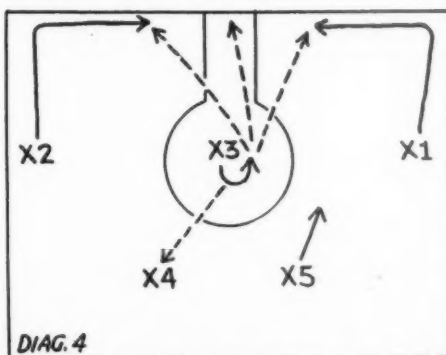
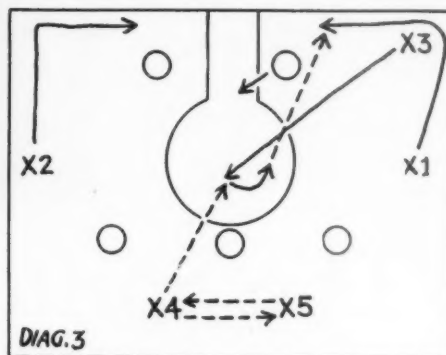
As the guards reach the front line of defense, X3, the forward who is on the same side of the floor as the center, immediately cuts out from his corner directly toward the free throw line, while the center eases down and takes the forward's position in the vacated corner. As the forward, X3, reaches the free throw line, X4, the guard on the opposite side of the floor from which the forward came, should attempt to pass to him, as shown in Diagram 3. This might well be a bounce pass under the arms of the front line defense men. If the pass gets through and the forward receives the ball, he should immediately make a front pivot back in the direction from which he came, so that he will face the basket and his two offensive

team mates. As this occurs, the center and X2, the other forward, should cut from their corners along the end line toward the basket, each expecting a pass from X3, the forward "in the hole" at the free throw line.

X3, the forward with the ball, then has three offensive alternatives and one defensive alternative as shown in Diagram 4. If he finds himself unmolested, he may take a "pop" shot from that position, or, if he succeeds in drawing a defensive guard out, he may pass to a team mate cutting in on either side of the basket. As a de-

fensive alternative, if he finds none of the above offensive plays possible, he may pass out to either guard.

However, as the first forward, X3, cuts into the free throw lane, it is not always possible to make a successful pass to him. The primary defensive line may be playing close, and the offensive guard may feel he cannot risk the attempt of trying to get a pass through. This is a vital factor in the offense: the guards *must not* make wild attempts to get the ball through. They should pass the ball to each other and across in front of the defense and to their team mates on the side lines, as shown in Diagram 5, causing the defense



to shift with the ball and thus creating openings for a successful pass. The passing also requires proper and accurate timing, for it should be so adjusted that the guard who is on the side opposite the forward cutting out may make the pass to that forward. Thus, the forward will be cutting directly toward the guard who is to make the pass, and the possibilities of success will be great.

If the forward has already cut into the hole and neither guard can get a successful pass to him, he should hesitate there only momentarily and then cut out to the opposite side line. We then have the same offensive set-up as we had before: two men in opposite corners and one at the intersection of the free throw line extended and the side line. As shown in Diagram 5 they are now placed with one forward, X2, in the left corner, the center, X1, on the opposite side line, and the other forward, X3, who cut out for a pass, situated on the same side line as forward X2.

From this point the play is continued as explained above. However, this time forward X2 cuts out to the free throw line, his fellow forward, X3, on the same side with him, moves down and takes his place in the corner and the center, X1, hesitates in the opposite corner. As shown in Diagram 6, we then have offensive conditions similar to those we had before. The man in the hole, X2, should he receive the ball, has the same options of play as previously explained. Should he not receive the ball, he continues across the floor in the direction he is travelling to the opposite side line. This will put him on the side with the center, who will next cut out toward the free throw line. This travel of the two forwards and the center is dis-



Jump ball near the free throw circle in practice session of the Springfield College basketball team. Nuttall (the white-uniformed player wearing knee guards) eventually got the ball. The jumpers were Captain Hebard, "All-New England" selection last season (the player in white near the referee) and Hettler (2), the dark-uniformed player nearest Hebard.

cernibly a figure 8, with the free throw line as the point of intersection.

Miscellaneous Suggestions

The attempts to pass through the defensive front line should, of course, be interspersed with other offensive moves. If the defense masses, the offensive guards should shoot over the defense or the men playing the side lines should have opportunity for set shots. Success with these leads the defense to become nervous and

perhaps be drawn out of position so that a quick pass to a temporarily unguarded area may give real opportunity for scoring.

Probably a fifth to a third of the passes made by the guards after contacting the defense should be to the two team mates who are just beyond the front line of defense, X3 and X1 in Diagram 5.

The pass to the weak side is particularly effective as the ball may from this position be relayed in to the center spot with greater success than from directly in front of the defense; that is, in Diagram 1, guard X4 may pass to forward X2, who passes to forward X3 cutting out.

If X3, in Diagram 1, pivots toward his starting position, he is apt to evade his guard and be able to pass to X1 cutting in. If guard X5 has followed in as his defensive player, B, tries to care for X1, the defense is momentarily in a dilemma. This particular method of getting the ball through helps out when the defense changes to a 2-1-2 formation. In this case the cutter may be not X3 from the corner but X1 straight across court, right into the pass. The succeeding moves are the same as indicated before.

Not infrequently it may be necessary or desirable for the cutter to return the pass immediately to the guard from whom it came and carry his cut on to the side line, thus making possible a quick cut by a team mate from the other direction.

Some defensive guards are much more keen than others. Heady playing by the offense includes emphasis on passing and pivoting against the weaker side of the defense. Bounce passes seem to be more effective against the zone than air passes



Another jump ball near the free throw circle. Again Nuttall (the player highest in the air) eventually retrieved the ball.

and certainly more effective than floaters. Success in attack means fast, accurate and continuous movement of the ball. Men using the zone or position defense must

move with the ball; hence they tend to tire or grow careless when there is much fast passing.

The offensive guards need to be con-

stantly on the move in order to make their intentions more difficult to anticipate. Bounce passes and feints may be

(Continued on page 37)

Possibilities of Single and Double Pivot Plays

By Ward L. Lambert
Purdue University

THE pivot play as used since the three-second rule has been in force does not differ much from this play as used before the rule became effective. Coaches who like this type of play, or who have had an expert player in the pivot position, have used it just about as formerly.

This statement is made with reference to college basketball where the play is on a floor of fifty by ninety feet. On the smaller floors, when it is necessary for the pivot man to be outside the lane or circle, the efficiency of the pivot post play has been decreased. This is true because the floor space in which the pass may be received is limited for maneuver by the players without the ball, and because the half of the circle farthest from the end line is excluded from use by the pivot man. The contention has been raised that the half of the circle farthest from the end line should be allowed the pivot man. The three-second rule was put in force by the Basketball Rules Committee because it felt that the fouling by the pivot man and the player guarding him had become impossible to legislate in the lane near the basket and gave the large player there an undue advantage.

Let us look now at the possibilities of the double pivot play, in which a player is posted on each side of the lane. It is obvious that a coach would use this type of offense only when he has two tall men to place in these positions. In the accompanying diagrams, we assume that the defense is playing man-to-man. In Diagram 1, we have X5 with the ball. He passes to

IN this article, Ward L. "Piggie" Lambert discusses briefly the single and double pivot plays under the restrictions imposed by basketball's three-second rule. Under Coach Lambert, Purdue University basketball teams have enjoyed unusual success, having won or shared the Western Conference championship eight times in the past sixteen years. The Purdue team of the current season is attracting considerable attention because in a day of fast basketball it possesses unusual speed, even for a Lambert coached team.

X1. At the same time, X2 crosses in order to screen A so that X1 may shoot.

In Diagram 2 we again have X5 with the ball. He passes to X4, who in turn passes to X1. The latter pivots, screens off B and then passes to X4, who may shoot.

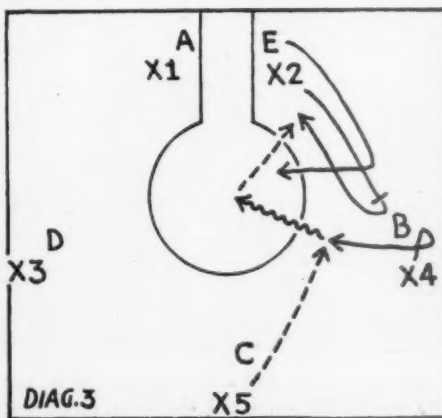
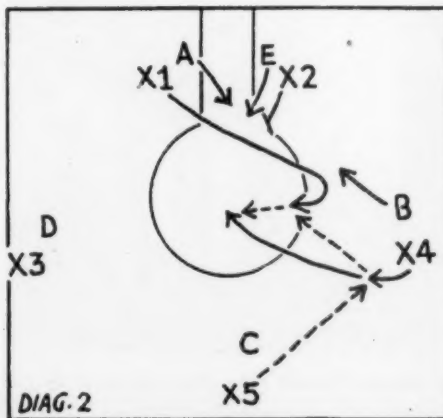
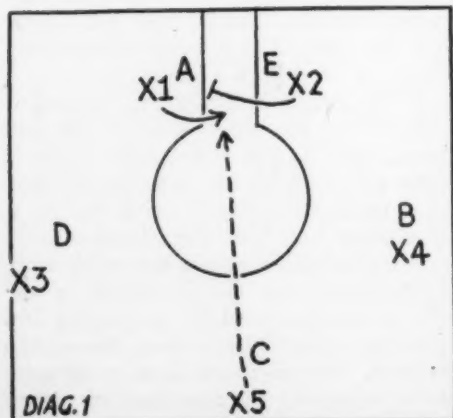
In Diagram 3, as in the two preceding diagrams, we have X5 with the ball. Now X2 moves out to a position next to B while X5 still has the ball. X4 first fakes toward the basket and then breaks back and toward X5 to take a pass from him. B finds himself screened by X2. X4 now drives toward the basket with a dribble. E must shift to take X4, but, when that happens, X4 passes to X2, leaving B behind.

These simple plays give an idea of the possibilities for screening in the double pivot.

Now, let us look again at the diagrams on the double pivot style of play. You may or may not have thought that there was merit in the double pivot. If you have, let us now speak of some of the difficulties that may be encountered with it.

Suppose you have worked with boys to develop a double pivot screening system until they are very proficient in it. Now suppose a zone defense is used against them when your plans call for man-to-man defense. You will surely find that a zone defense makes the operation of your offense very difficult.

Suppose you find that A and E in the diagrams are instructed to play in front of X1 and X2 and to invite X5 to make the pass over them into a limited territory. Suppose when X5 has the ball that D and B float out into the middle and make the screen plays more difficult. Suppose you instruct your player X5 to hold the ball until the players are paired man-to-man and the defensive players refuse to pair. X5 merely continues to hold the ball. The score may be even, or your team may be ahead or behind. There is a stall in the play of the game. This may go on indefinitely until possibly the last few minutes. I have seen situations in which the player near the center line has merely held the ball when his team was ahead, and the defense would not come out to the middle of the floor. I have seen other situations in which the defensive players have not had to come out because they were ahead. Is there anything to prevent these situations?





A fast-break set-up in a game between the University of California at Los Angeles and the University of Southern California.

Offensive Basketball With the Elimination of the Tip-Off

By J. M. Barry
University of Southern California

DURING the past three years the Southern Division of the Pacific Coast Conference has been playing without the tip-off in conference and non-conference basketball games, and is

well-prepared to parade the results before the basketball coaches and spectators throughout the United States.

The greatest effect of the elimination of the tip-off has been on the offense. There

is no question, under our rules, that offense overshadows defense, and the reception which the game without the tip-off has received on the Pacific Coast by the press, spectators and coaches proves conclusively that it has been a huge success.

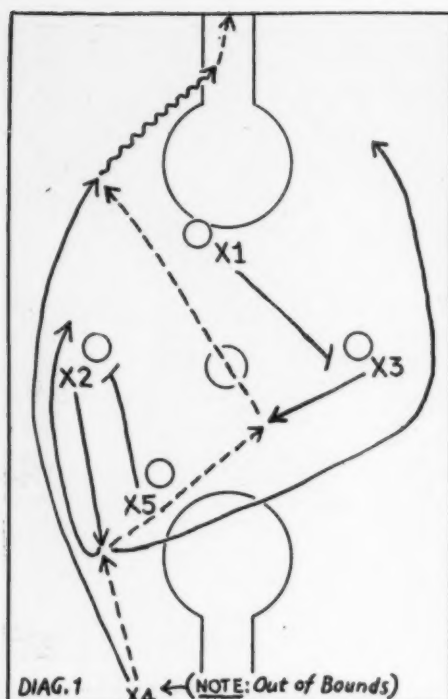
Athletic coaches in the game today realize that in many of our interscholastic and intercollegiate sports the defense overshadows offense and consequently our athletic contests become drab affairs and lack interest, both to the spectator and the contestant.

I shall try to explain how the elimination of the tip-off in basketball has helped offense and made the game more popular on the Pacific Coast. First of all, a team that is lagging five or six points in a game without the tip-off can no longer sit back in a five-man set defense and play a waiting game, but must go down the court and force the play. What does this mean to the game? Simply this: a basketball game played on the entire court, more action, better open play, a spread defense and fast ball-handling over the entire court, combined with speed in dribbling.

In a few diagrams and pictures I shall try to show how the elimination of the tip-off has changed the game from one of tight defense to one of open defense and open play. I mentioned previously that the defense is constantly forced down the



The University of Southern California basketball squad in a practice session. This shows the shooting position in a semifast-break.

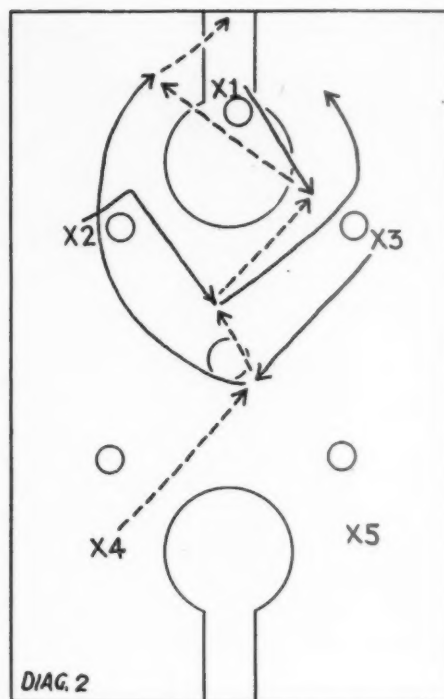


court, particularly when the defensive team is from six to eight points behind, and an offensive formation, such as that shown in Diagram 1, is used with success. In Diagram 1, we assume that the ball is

being put in play after a score has been made. X4 takes possession of the ball, and X5, X2, X3 and X1 drift into their respective positions. X5 drifts up the court to make a pick-off play, freeing X2. X4 passes to X2. X1 goes across the court to pick off the guard of X3. X2 breaks down the opposite side of the court after passing to X3. X4 takes a pass from X3 near the free throw circle and dribbles in for a shot.

Diagram 2 shows an offensive play with the defensive team set well down the court, the object, of course, being to force longer passes to the forwards and to throw off the timing of the opponents. We have found that a pass to the forward on the opposite side of the court, such as X4 makes to X3, is effective. Then the play continues as diagramed, X3 passing to X2, X2 to X1 and X1 to X3 under the basket. In this formation, a coach may work in several options and develop a number of plays.

I have tried to show with these two diagrams some formations that the coaches of the Southern Division of the Pacific Coast Conference have been forced to use, because of the elimination of the tip-off. The public, as well as the players and sports writers, like basketball without the tip-off because it is getting away from the



old orthodox style of play, with the sagging man-for-man defense and retreated zone, which have forced the slow deliberate passing game that has become so unpopular.

Offensive Set Plays in Basketball

By Everett N. Case
Frankfort, Indiana, High School

OFFENSIVE set-ups in basketball are now being commonly used by coaches, especially when the opponents' defense is set and the offensive team is striving to keep possession of the ball and break through the defense for open shots. By fast moving of the ball by the offensive team, the opponents' defense is forced out of position, permitting the offensive team to secure good attempts at the basket.

A variety of set plays is employed by leading Indiana high school quintets, es-

IN the December issue, Everett N. Case described drills for developing basketball fundamentals. The present article is devoted to an explanation of diagrams of set plays being used by Indiana high school teams. Mr. Case is well known in Indiana basketball circles. A Frankfort High School team coached by him won the 1936 Indiana state basketball title.

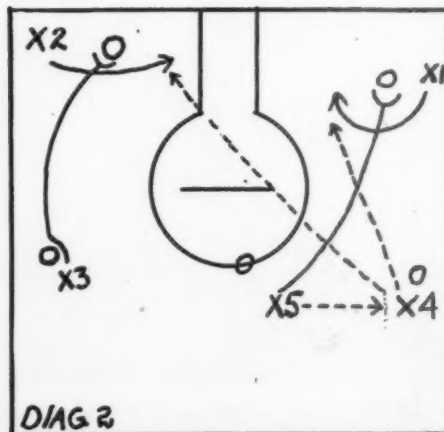
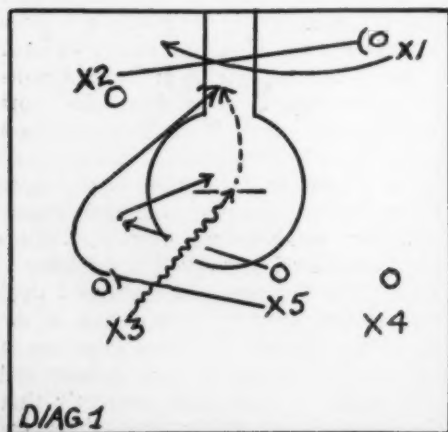
pecially as a change of pace from the fast-break. Set plays require excellent ball handling and manipulation, with the players screening and cutting in and out until one man is in a good position to receive a pass or take a shot. If every man on the offensive team moves or breaks with every pass, the defensive team is sure to make mistakes and permit open basket attempts. This fast passing, moving and cutting will work against either the zone or man-to-man defense. Against the zone, the ball can be passed faster than the zone can shift, while against the man-to-man defense, the set-ups are even more effective if the screens are employed.

Since the 1935-36 rule changes limited the player in the free throw area to three seconds, several changes have been made

in the set types of offense. The formation with two men in and three out is still used by a great many teams, while the three men in and two out type has been varied to comply with the new rule, which has eliminated the stationary pivot man.

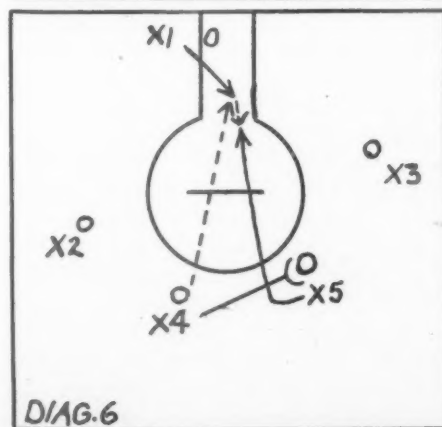
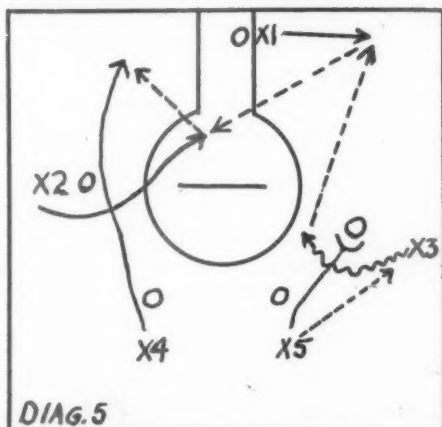
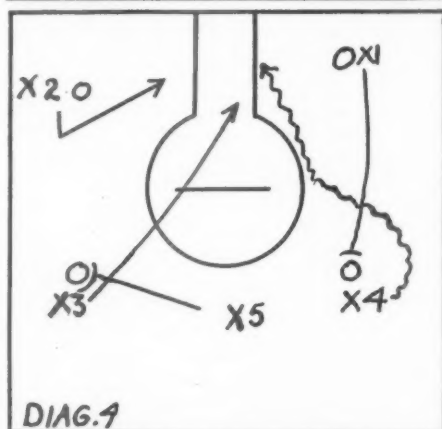
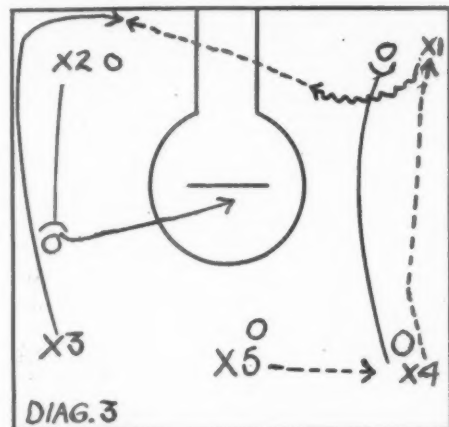
In the diagrams which accompany this article, I am listing several plays for each type of formation.

Diagram 1—X3 fakes a pass or shot, and, after X5 screens X3's guard, X3 dribbles down the center of the floor. When he is stopped by X5's guard, he



pivots and passes to X5, cutting for the basket. X2 cuts over and screens for X1, who cuts for the basket. X5 may shoot or he may pass to X1.

Diagram 2—X5 has the ball. He passes to X4, who meets the pass. X5 then



screens X1's guard, and X1 cuts toward the basket. X3 screens X2's guard. The pass goes from X4 to either X1 or X2. If the opponent's defense shifts on the screen, then X3 and X5 fade in.

Diagram 3—X5 has the ball and passes to X4. X4 passes to X1 and then cuts in and screens X1's guard. At the same time, X2 screens for X3, who cuts around X2 on the outside. X1 comes out with the ball on a short dribble and passes to X3. If X3 is not open on the screen because of a shift of the defense, then X3 continues over and screens for X5, who made the initial pass, and X5 breaks around. In the event there is a shift on defense after the screens, then the screener fades. The screener will be open nine times out of ten, as he will be ahead of his defensive man on the shift of the defense.

Diagram 4—X4 has the ball, and, as he gives the signal, X1 comes out and screens X4's guard. X4 dribbles in to the basket for a short shot if there is no shift of the defense. At the same time, X5 cuts over and screens X3's guard, and X3 breaks through the center. If X4 is stopped, he may pass to X3. X2 fakes down the floor, reverses and breaks back fast.

Diagram 5—This and the following diagrams show offensive set-ups with three men in and two men out. In Diagram 5, X5 has the ball and passes to X3. X5 continues through and screens X3's guard. X3 comes around on a sharp, short dribble and passes to X1, who has pulled out to the side. X2 breaks to the free throw circle and receives a pass from X1. X4 breaks around on the weak side of the floor, just vacated by X2, and receives a pass from X2.

Diagram 6—X4 has the ball and passes to X1, who cuts into the free throw lane. After X4 has passed the ball to X1, he crosses over and screens X5's guard. X5 knifes through and receives a pass from X1. It is very important that on this play the forwards stay out on the sides of the court.

Diagram 7—This is a variation of the play shown in Diagram 6. X5 has the ball and passes to X1, who steps into the free throw area to receive the pass. X5, after passing the ball to X1, cuts across the floor and screens X4's guard. X4 cuts in, receives a pass from X1 and dribbles. X1, after giving the ball to X4, steps outside the free throw area. X4 then passes the ball back to X1, and X1 passes it right back to X4.

Diagram 8—X1 comes out and screens X4's guard. X4 passes the ball to X2 and then screens X2's guard. X2 starts to dribble, and X1 then goes over and screens for X5, who is open to receive the ball and take a set shot. This play may be worked on either side of the court. X2 may dribble all the way in or he may pass to X5 or to X1, who fades from the screen.

Diagram 9—X4 passes to X2, after

which he cuts across the floor and screens X3's guard. X3 comes around the screen and is open for a pass from X5, if there is no shift on the defense. X2 passes to X5 across the court. X5 in turn passes to X3, who has been freed by the screen.

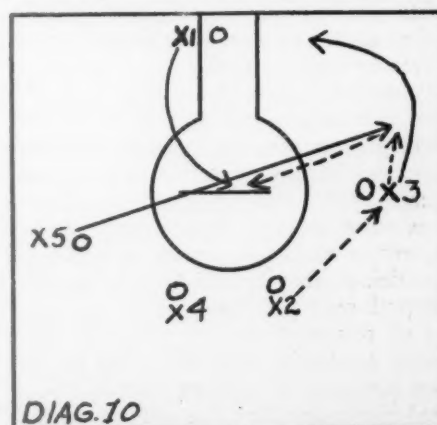
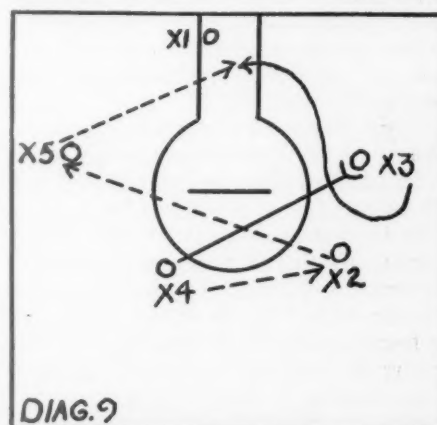
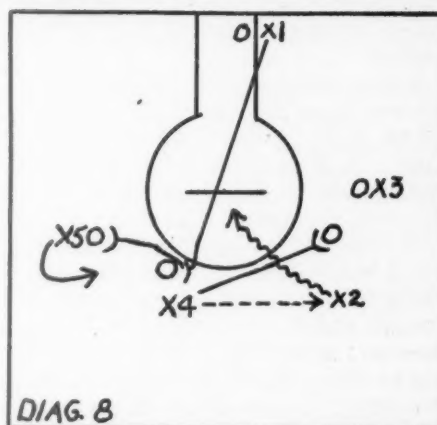
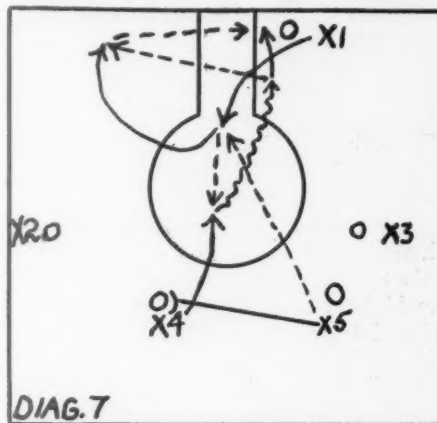


Diagram 10—X2 has the ball and passes to X3. X5 cuts across the court and receives a pass from X3. X1 cuts to the

free throw line and receives a pass from X5. X3, after passing to X5, breaks around X5 and may be open for a pass

from X5. Thus the last pass may go from X5 to X3. X1, after receiving the ball, may take a shot, or he may pass to X3.

Center Play in Ice Hockey

By Westcott E. S. Moulton
Pomfret School

THE key man in the attack of a good hockey team is the center. It is he who is the spearhead on the offense and the bulwark on defense. There are many qualifications which go to make up the ideal center. If possible, he should be tall and rangy, with well-developed long arms. Of course, these physical attributes are not absolutely necessary. But the old statement still holds true that a good big man is usually better than a good little man, although in ice hockey size is not so important as it is in football.

A good center should be agile, clever and cool under fire. He should be an excellent skater, perhaps the best on the team. In stick-handling he should be without peer on his squad, as no other player on the team has so many opportunities to call this skill into use. He should be intelligent. In other words, he should be able quickly to diagnose the strength and the weaknesses of his opponents at an early point in the game and then to direct his own offense and defense accordingly. Above all he should be an active leader. Even though he may not be the captain, he is in the best position to spur on the team and by his own actions and play be an example to his fellow players.

Every team needs what is popularly known as a "spark-plug" to keep the team at a high level of enthusiasm throughout the game and also to keep the players from becoming overanxious in the heat of the contest. Skating over all parts of the ice, the center is in an excellent position to be a leader, to give words of encouragement to team mates and to spur them on to greater efforts, when such are necessary.

Offensive Play

The center demonstrates his greatest ability on the offense. His passes should always be accurate so that his team mates may receive them with a minimum of effort. Through careful practice, he should develop his passing ability so that he has complete control over the puck at all times. Wild and uncontrolled passing loses many games. In receiving passes, the center should be careful to cup-over his stick so that he will be able to hold the puck on it and prevent it from glancing off to the front or to the rear. The ability to decide when and when not to pass comes only with experience, but a good center acquires this ability quickly

THIS article on center play is especially valuable as it comes from a hockey coach who in his high school, prep school and college days was one of the best of the center ice players in the United States. After attending Dorchester High School and Williston Academy, both in Massachusetts, and Brown University, where he played varsity hockey for three years, he joined the coaching staff of Pomfret School, Pomfret, Connecticut, where he is now Director of Athletics, coaching ice hockey and football. The illustrations used in connection with this article show the author in action.

and keeps it uppermost in his mind throughout a game. Passing the puck ahead to a waiting team mate, or putting himself in advance of a team mate with the puck to receive a forward pass, requires constant practice on his part.

More than the players in any other position on the team, the center is at liberty to skate to any place on the rink. His movements are unlimited, but he should be careful not to waste his energies

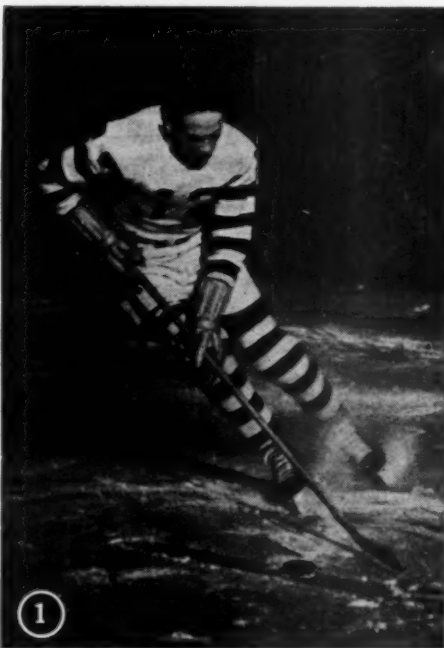


Illustration 1—How to stop. The skates are turned at a right angle to the direction in which the body is moving. The lean of the body depends upon two things: the speed at which it is moving and the quickness of the stop desired. Note that the hands are well spread and that the stick is ready to take possession of the puck as the carrier "jumps" quickly in the opposite direction.

by skating wildly up and down the rink without intelligent direction. He can be a great aid to his wings and defense players by working with them and co-ordinating his movements with theirs. The center should be able to "jump" faster than any other player on the team and also be able to stop as quickly.

Goals are scored by shooting the puck at the goal by one method or another. Consequently, this part of the game cannot be overemphasized in the play of the center. Being in the favored position to make the greatest number of shots at the goal, he should be the best shot on the ice. He should learn to drive the puck hard and quickly to catch a goalie off-balance and unprepared. He should know when to stick-handle the puck up to the goal, draw the goaltender out of his position and then slip the puck by him. With a goalguard kneeling or low on the ice, the center should shoot the puck high and for the corners of the cage. If the goalie is standing up straight, the center should shoot low and to the corners of the cage. Sometimes it is better to have the center slip the puck along the ice and into the goal rather than lift it into the goalie's hands. The center must play a varied game and be continually outthinking and outwitting the opposing team. He should learn to shoot the puck without looking at it and thus be able to watch for the openings in the cage. He may then look in one direction and, when the goalguard moves to block that opening, slip the puck in to the opposite side of the cage.

The ability to skate well is, of course, one of the most important requisites of the center. He should learn to skate in a crouching position, low to the ice. Too many hockey players skate stiff-legged and in an upright position. This prevents them from moving quickly and easily and also causes them to fall down at the slightest hindrance. Skating low permits a player to cut quickly in one direction or the other, to stop quickly and to "jump" when the occasion arises. Moving in a crouching position, he is also able to jump a stick with a minimum of effort.

Many players, especially the inexperienced, have lost possible goals because of their inability to jump an extended stick to stop the puck or a stick lying flat on the ice. Stick-jumping requires a great deal of practice and good balance. In addition to jumping the stick, without fall-



Illustration 2—Flat stick check. All players should develop this skill. The left leg and skate are the center of balance, with the left hand and right knee as checks. The stick should be as nearly flat on the ice as possible to prevent the puck from slipping under it. This maneuver should be executed by a quick dip and slide across the ice.

ing down, the player must retain the puck, or his efforts will be in vain. The fundamental part of this drill is the actual jumping of the stick. The center should remember that the best method of jumping is to lift first the foot that is nearest the higher part of the extended stick. In this manner he can best gauge the height he should go in moving over the stick. The other leg and foot follow the first at about the same height. Stick-jumping is one of the most important skills of the center and he should practice it until he can do it mechanically.

The center should be proficient in the play of the face-off. Gaining possession of the puck in this strategic position results in many goals scored. In addition to the usual methods of batting the puck back to his team mates, the lifting of the opponent's stick and the half-circle block and pass-back, the center should try occasionally placing his stick suddenly beyond that of his opponent and thus intercepting the pass-back to the opposing team. This maneuver has resulted in goals scored on the face-off after only a few seconds of play. It catches the opposing players by surprise because they are not prepared for this strategy. On a face-off near the opposing goal, it is sometimes a good plan to bat the puck right at the goal as it strikes the ice. This, too, has the element of the unexpected in it that occasionally scores.

With the new penalty shot introduced into college and amateur hockey, it is important that the center be skilled in this department. The shot is made from a

circle thirty-eight feet out from the opposing goal. The goaltender is the only person who can stop the shot, and he must be within one foot of his goal line. In practicing this shot the center should aim for the low corner of the goal farthest from the goalie. If the goalie is in the middle of the cage, the shot should be directed to the side in which his free hand is located and so low to the ice that he cannot reach it.

It has been found from experience that the best method of performing this shot is for the player making the shot to start from well behind the puck and approach it with controlled speed. If he comes at the puck too fast, his aim will be destroyed and, on the other hand, if he approaches it too slowly his shot will be slow, weak and easy to stop. Some players bat the puck as they approach it, but success has been usually more consistent if the player actually contacts it on his stick and then lifts it before he takes it out of the circle. Here again, if the center has watched the opposing goalie throughout the game and studied his movements, he has probably found that the goalie is less proficient in stopping shots on one side or the other and then knows which side to shoot at from scrimmage as well as from the penalty shot circle.

The center should always have a reserve bit of energy on which he can call in an emergency. If the game is close toward the end, he can then put on a burst of speed that will inspire his team to greater efforts and prevent the opponents from scoring. If his team is behind, he can also call upon this energy for greater efforts and use all of the tricks and skill that he possesses to score just as many times as possible.

The center should be the greatest playmaker on the team. In other words, he should always try to place himself in the position best fitted for scoring and should pass so that his team mates can score from the plays that he sets up. Circling around in front of the opposing goal while waiting for a pass-out from a team mate, passing out from behind the cage when he himself is in possession of the puck, shooting at the goalie and following up rebounds all aid in his play-making ability.

Defensive Play

The defensive ability of a hockey team may be traced directly to the defensive skill of the center. He can break up opposing plays before they get started and can be a bulwark against offensive thrusts. Checking back quickly at all times, he can put pressure on the opposing players and cause them no end of trouble.

There are, however, certain skills which the center may develop that will make him an even more valuable player. The art of using a flat stick check will enable the center to get control of the puck from his opponents many times when he would



Illustration 3—Flat stick check. The puck is about to be secured by the stick. At the instant the puck is secured, the player should rise immediately and "break away" for the opposite goal. The left hand and right leg should provide the lift so that the carrier can rise quickly with the puck.

otherwise be left behind. In developing this ability, the center should first acquire the fundamentals. He should bend one leg and slide on the skate, at the same time extending the other leg behind him and using his knee and opposite hand as balancers. Simultaneously he should extend his arm and stick, with the latter as nearly flat on the ice as possible. The stick covers a wide area and if it is held flat it will be impossible for the puck to slip under it. As soon as the player obtains the puck he should immediately shift to a skating position and "break" for the opposing goal. Illustrations 2, 3, 4 and 5, show this check.

The center should practice skating backwards so that he may move with the attacking players and, when they skate toward the side of the rink, he may go after them. If he were not moving backwards, it would be necessary for him to start from a stationary position, which puts him at a disadvantage. The art of skating backwards is in itself a great aid in the development of balance, that indispensable quality for the expert skater.

Most goals from outside the blue line are made from the center lane of the rink. Thus, it is important that the defensive center turn all plays possible to the side of the rink. The center can accomplish this in many ways. First he can skate-off the carrier by turning with him as he comes down the ice and forcing him to the side of the rink. He can flat-stick check him to the side boards. He can draw the carrier into going in a certain direction by turning in the opposite direction and then suddenly swerving back



Illustration 4—Flat stick check (side view). Note the controlled balance. The right foot should be pointed to prevent the toe of the skate from digging into the ice and thus retarding the progress.

Illustration 5—Flat stick check (side view). The player has secured the puck and is about to rise with it. Note the forward lean of the body as the player comes up with the puck to "break away."

Illustration 6—Jumping a stick. The offensive player (in white) has just started his jump. The foot nearest the higher part of the extended stick should always be the first to leave the ice, as the player can then gauge the height the foot should go. The puck has slipped under the opponent's stick and is about to be picked up by the carrier as he completes the jump.

Illustration 7—Jumping a stick. The carrier is descending after making his jump. The stick is touching the puck, and the player is ready to carry the puck along with him.

Illustration 8—Jumping a stick. The left foot is on the ice, with the right completing the jump. The puck has already been pushed forward, and the carrier is picking it up for his attack on the goal.

Illustration 9—Jumping a stick (side view). The carrier is completing his jump and at the same time is picking up the puck with his stick. In this picture, the attacking player has jumped too high and has thus wasted energy in addition, perhaps, to throwing himself off balance. Many novices make the mistake of jumping too high, with a resultant fall or loss of speed.



again when the carrier has been drawn into the trap.

The center should always be alert to intercept passes made by opponents. Considerable judgment on the part of the center is required to determine when to try to intercept a pass and when not to try it. If he makes a mistake, it may well cost his team a goal. However, when he sees that a pass is about to be made he may lunge forward, intercept it and then be in excellent position to attack the opposing goal. The surprise lunge is often very successful if not used too many times, as the unexpectedness of it catches the opposing team off balance and unprepared.

When a team is short-handed, the pressure put on the center is very great. It

is then that he may rise to the occasion if he has practiced two or three simple but effective plays. As the attacking players start down the ice with the puck, the center should skate toward them and, just before he comes up to the puck-carrier, should turn a half-circle and skate with the carrier. If possible, he should take the puck from the carrier and perform what is known as "ragging the puck." In this procedure the carrier holds on to the puck as long as he can while skating in the center zone and every once in a while moves toward the opposing goal so as not to delay the game. This procedure is followed to use up as much time as possible and to prevent the opposing team from scoring while the team is short-handed.

"Ragging the puck" requires fine stick-

handling, but it is a very useful accomplishment for the center to possess.

Both offensively and defensively the center is in the best position to win or to lose a hockey game. He should bend all of his efforts toward improving his individual and team technique, and must at all times keep himself in the best possible physical and mental condition. He should be confident of his own ability and the ability of his team and yet should be eager to learn and absorb all the finer points of the game which are continually in the process of development. The will to win must be imbedded firmly in his mind, and he should be able to instill this spirit in the other players. In the final analysis, the job of the center is perhaps the most important on the team.

Continuity Screen Play in Basketball

By Ben Neff

Lowell High School, San Francisco, California

A CONTINUITY screen play affords an excellent ball handling drill for all players, as it requires five ball handlers. The drill in the set-up generally develops the ball handling ability. It is, I believe, the best all-purpose offense in one set-up, as it is easily adapted to scoring, delayed and stalling offenses. The stall is particularly effective because it is often concealed from the opponents. Through this system a floor balance is maintained which is almost impossible in free play. Plays may be designed to utilize the best scorers and best feed men and to decoy players of the opposing team very cleverly.

The screen is based on the principle that any player is entitled to any position on the playing floor provided he gets to that position first. At no time should a screener attempt to bump an opponent; the aim of the screener is to obtain a position an arm's length away from the de-

GRADUATING from the University of California in 1923, Ben Neff began coaching at Lowell High School of San Francisco in 1925. As the San Francisco High School League sponsors basketball teams in the 110, 120 and 130 pound and unlimited weight classifications, Neff has had an excellent opportunity, through coaching so many teams, for experimentation in play. In the past seven years, Lowell High School unlimited weight teams have won the league championship five times and placed second once.

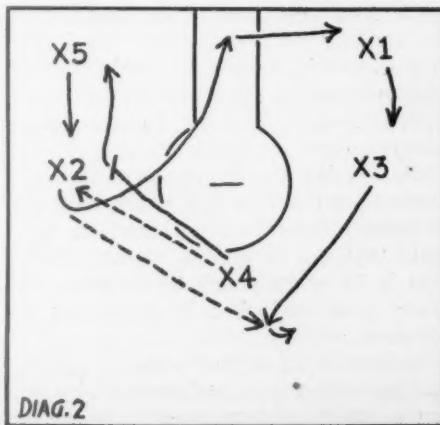
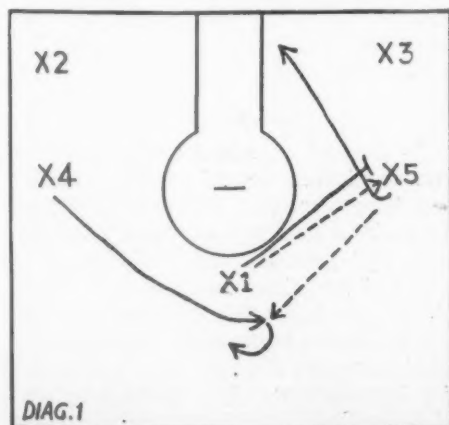
fensive opponent. If the defensive player overshifts out of position, there is nothing the screener can do about it but attempt to build a new opportunity. If the continuity is effective, sooner or later the screen is set up. The continuity screen soon finds the opponents who are most easily screened or it works patiently to trap some opposing player.

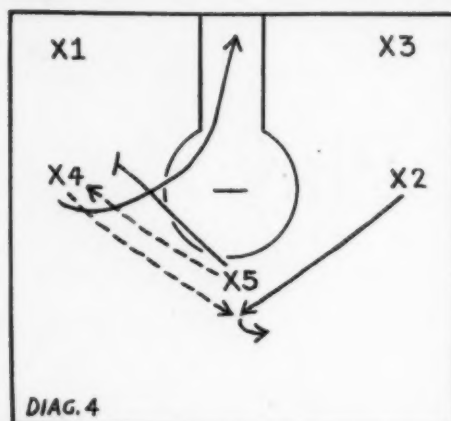
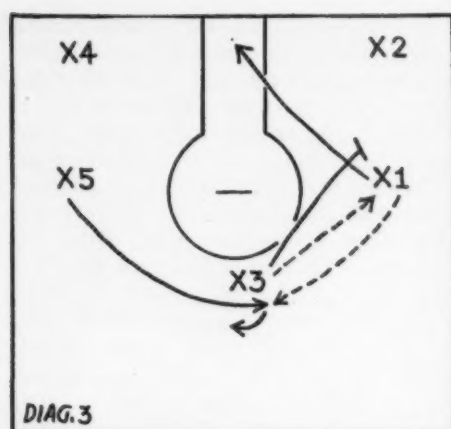
The five-man screen play may best be described by explaining the accompanying diagrams. The play is simple. The rapid passing, the fast changing of positions and the movement of players in the continuous resetting make the play effective. The play is a variation created from the Carlson five-man ahead of the ball idea. The continuous screen break is much more effective than a continuous cut break.

In Diagram 1, players X2 and X3 are near the corners in the forward positions; X4 and X5 are in the guard positions op-

posite the free throw line and X1, the center, who has the ball, is outside the free throw circle midway between the side lines. This set-up is continuously reset. X1 passes the ball to X5 and screens X5's guard. On receipt of the ball by X5, X4 cuts to the center of the court to receive a pass from X5. X5 cuts for the basket, expecting a return pass from X4. If X5 is not open, X4 pivots toward the side line from which he came. The pivot by X4 is the signal for the reset in this style of play.

Four things happen simultaneously on every reset: (1) The player (X2 of Diagram 1) in the corner toward which the ball handler (in this case, X4) pivots, cuts to be the next receiver. (2) The player, X5, who cut for the basket around the screen, moves to the corner just vacated, in this case by X2. (3) Player X1, the screener, moves to the corner near the side on which the screen occurred. (4) X1





changes places with the corner player, X3, who breaks out along the side line to the position opposite the free throw line.

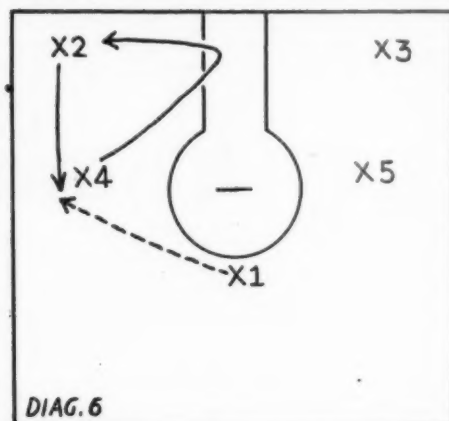
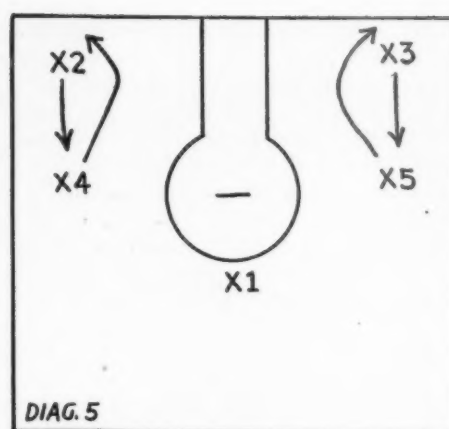
In Diagram 2, the players are in the new reset. X4 passes to X2 and screens

X2's guard. X3 cuts to the center of the court for X2's pass. X2 cuts toward the basket for a return pass. X3 fakes a return pass to X2 and pivots for the new reset shown in Diagram 3. Player X1 cuts to be the new receiver. X2, who cut around the screen toward the basket, goes to the corner vacated by player X1. The screener, X4, changes places with the corner man, X5, to effect the reset. In Diagram 2 is indicated the course of the players into the reset shown in Diagram 3. The play in Diagram 3 and the reset in Diagram 4 are obvious. The play is faked in each case. The idea of continuity must be drilled into the players.

General playing considerations: In Diagram 5, player X1, bringing the ball over the center line on the first set-up, is the man in the middle. Guards X4 and X5, change places with forwards X2 and X3, who break along the side lines to receive the first pass. The player who passes from the center to the side line sets up the screen. The man who passes from the side line to the center cuts for the basket around the screen.

In Diagram 6, X4, who has cut out along the side line, is pressed and "back doors" his guard by cutting for the basket. At the same time, X2, the player in the corner, cuts out to be the new receiver. X4 cuts to X2's corner if X2 takes a pass from X1, and the continuity goes on.

The Lowell teams generally start a game using this type of play to warm up, relax and become accustomed to handling the ball. The absence of ball possession tends



to make the opponents tense, as well as too anxious, and destroys their confidence. The play is most effective in the last quarter to protect or increase a lead. The play is not difficult to teach or learn.

Basketball Theory, System and Style

By Frank Lindley

Newton, Kansas, High School

NATURALLY, when our team wins a state basketball championship, we like to feel that the best team won. Last year, I thought we had the best team. I was convinced of that even before the tournament started, but still I was skeptical of its winning. I had seen too many tournaments in which the best team went out early—and not Newton teams either—to be optimistic concerning results. It takes a good team to win a tournament, and also a lucky one, but not necessarily the best one. About the only team that can be sure of winning is one that is 15 or 20 points better than any other team—and then it should not be too sure.

Results of all athletic contests are becoming more unpredictable year by year, but a basketball tournament is in a class

by itself in this respect and that applies not only to high school tournaments but to Amateur Athletic Union tournaments as well. I have seen over fifty of both.

A GRADUATE of Southwestern College, Winfield, Kansas, Frank Lindley began his coaching career with one year at Lincoln, Nebraska, High School. In 1914, he went to Newton, Kansas, High School where he has remained since, with the exception of a year in the military service during the World War. Under Mr. Lindley, Newton basketball teams have made an unusual record, winning the Kansas state championship six times and being runners-up an equal number of times. Newton High School was the winner of the 1936 Kansas state basketball tournament.

After watching a team, favorites in an Amateur Athletic Union meet, go out in the last half after having amassed a first half lead of 20 points, I am prepared to believe that almost anything may happen in any tournament played by our modern basketball teams.

Tournaments

As far as high school tournaments are concerned, there never has been and never will be a team that can reach and keep its peak for four games between Thursday noon and Saturday night. There will be one and sometimes two games in which the players do not "click." They may play good ball even in those games, but not the kind that puts a smile on your face and joy in your heart. If, in their poor games, they are lucky enough to meet one of the

weaker teams, or a good team in one of its "non-clicking" moments, or perhaps a team whose style suits their own style, then they may go through to victory. But if they are unlucky enough to hit in such games a "hot" team, or one that is playing inspired ball, their coach may watch the rest of the tournament and mourn over what might have been.

To me a tournament is a laboratory of human reactions stepped up to an intense degree by competition and the pressure of the spotlight together with the players' knowledge that each time they take the floor just thirty-two minutes stand between success and failure. Sometimes I marvel at the exhibition of skill and poise that adverse conditions produce. Perhaps the boys have not had enough experience to realize just what they are up against.

Styles of Play

These human reactions cluster together in styles of play and, to me, the interesting thing is to watch the various styles clash, shatter and reform until one or both become disorganized by a furious, desperate, sometimes futile effort to stem the tide of defeat.

Styles fatten on tournament play because winning teams popularize them. It is human nature to be influenced by a winner, and the heat and stress of tournament conflict tends to blunt perception and destroy perspective. A team wins. Because it wins it looks good, and so its style of play must be right. The next year other teams strive to accomplish the same results in the same way.

I know of no better example of that situation than our state tournament of 1935. Chanute, that year, "slapped everybody's ears down" by using a fast-breaking offense and did it so convincingly that the fast-break looked like the easy road to glory. The fast-break was not new to Kansas. It had been used more or less intermittently and successfully for years, but Chanute used it convincingly. Consequently, the state meet in 1936 was essentially a fast-break clinic, but the winner was not a fast-breaking team.

The Place of the Fast-Break

It is not that we lack appreciation of the spectacular features and public appeal of the fast-break. I believe the concerted drift in the direction of the fast-break has done more than any other factor to restore and revive public interest by providing the thrills that were so sadly lacking in the old slow-breaking or set offense, aided and abetted by the zone defense. I like the fast-break and I like to meet a team using it, but I am not in accord with the theory that this style is the foundation upon which to build a winning offense.

It would be just as sensible for a football coach to adopt and depend on the "razzle-dazzle" style as the only means of gaining yardage or crossing goal lines. The

"razzle-dazzle" in football has its place and has its purpose, but it is and always will be only part of a well conceived and effective attack. In the same way, the fast-break in basketball will disconcert many teams by increasing the tempo of the game and thus destroying their timing. When this happens, the fast-break looks unbeatable. But it sometimes happens that the opponents refuse to become disconcerted. Then the pressure piles up on the fast-breaking team. The players break a little faster and before long they become a wild



Frank Lindley

passing, wild shooting crew whose defensive play is full of holes and whose offensive work has lost all semblance of team play.

The fast-break should be a part of every team's offensive equipment—but only a part. Back of it and the basis for it should be the ability to execute the fundamentals faultlessly, and along with it should go a definite, dependable method of attack. The best means that I have discovered to win ball games is to have five players well grounded in the fundamentals, with no weak links in defense; boys who can hit the basket and who will work together to see that one of their teammates gets a chance to hit. You may say that if you had such boys you would have champions, and that it is just what I mean. Five such boys will make any style of play look good, but you cannot, or at least I have never been able to, develop boys to a point of high proficiency by using a fast-break. After you have boys of the type I have described, then you can and should at times use the fast-break, but even then it may be overdone. Much of its effectiveness depends on when it is used. If it is used all the time, it ceases to have that change of pace element which makes it so disconcerting. Even if it should be effective all the time, there still remains a debatable point as to how many games in a tournament a team can keep up the pace required

by the fast-break. If all opponents are using it, then the odds will be even. But if some teams do not, does not this fact give them an advantage?

Well, that is one of the theories each coach must determine for himself. We have settled the problem to our satisfaction, at least, by using the fast-break when we have an opportunity; that is, whenever we have an extra man leading his guard. We may misuse the fast-break much of the time even under those circumstances by not easing up at the right time. It grows like a fever. A fast-break for the average high school team is not really a fast-break. It is a stampede. It is a wild-eyed, hair-raising rush that ends in a set-up or a wild pass or a wild shot. We try to eliminate the last two possibilities by easing into our plan of attack if the set-up does not materialize.

Our plan of attack is not a deliberate, set play affair, but rather an orderly, balanced procedure in which every man is moving, every man is timed, and balance is preserved in almost all situations. In it, four starting operations predominate and they merge into combinations and variations that provide as high as fifty different possibilities.

Pet Theories

Every coach has his pet theories. If he is successful, then those theories must be sound with reference at least to his methods and material. They might not be sound under all circumstances. Consequently, they are debatable, and so might be interesting. We, too, have our pet theories, and I believe in them even though some of them may be in direct contradiction to those advocated by many good coaches. Some of these theories are negative in assumption, which might be the wrong psychology unless we went a step farther and made them positive in their application. A few will be mentioned.

I do not believe in trying to develop an ambidextrous pivot man. We have natural right-handed and left-handed pivot men, but no ambidextrous ones. I should like to have one, but I do not hope to develop one. We have a hard enough time developing a satisfactory degree of accuracy with each player's natural hand to waste time on the other.

I do not believe in hook passes. Our players do not use three in a season. My theory is that if a player cannot pass with two feet on the floor he had better practice until he can. We have enough interceptions without having our players go up into the air to increase the number of these. Hook passes are hard to block, but easy for an alert team to intercept. We like to get our opponents' feet off the floor.

I do not believe in having a player pass at the end of a dribble without the momentary stop that will enable him to hold his pass if necessary. I might believe in

(Continued on page 35)

Strategy in Amateur Wrestling

By Richard K. Cole
Brown University

TEN minutes is the length of an amateur wrestling bout. If extra periods are necessary, the bout runs for sixteen minutes. During this relatively short time, contestants are putting forth their utmost efforts to win. It is, therefore, essential that they do their best and take advantage of all openings which may result in victory.

Very important and sensible questions which may be in a wrestler's mind are the following: What shall be my method of attack? Shall I plan to win by a fall or be content to win by a decision? Is it better to wrestle offensively and take chances, or wrestle defensively and wait for openings? What is the strategy employed by a successful grappler? The purpose of this article is to explain, in part at least, the strategy of attack and defense of wrestling encounters.

Offense or Defense?

Generally speaking, an offensive game is better than a defensive game. If you employ defensive tactics, your opponent will soon start to press and be on the offensive. Then you may be at a distinct disadvantage. Your method of attack depends upon the strength, condition and ability of your opponent. If you know nothing about the way your adversary wrestles, it is best to wrestle cautiously at first and "feel him out." After a matter of two or three minutes, you can usually catalog the balance, speed and strength of an opponent. Then the method of offense and defense may be determined.

A bout may best be planned when a man knows something about the way his opponent works and the holds he uses. This is true especially in tournament competition because the opportunity is present of watching your next opponent in action with someone else. Remember that competitors rely on their "pet holds" first, and if they cannot work them they resort to other grips which they probably are not so efficient in executing. By scouting another team, a coach can obtain much valuable information for his own team. It is true that members of any team usually specialize in the same holds, and a special defense can be built to stop them.

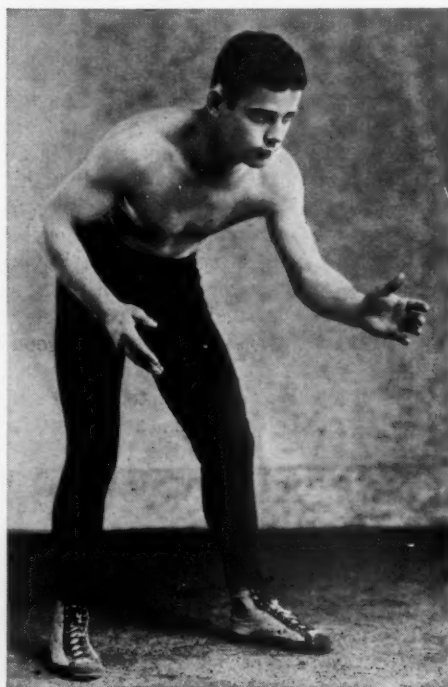
Before the Match

The actual winning of bouts is during the match itself, but the foundation of a winning team is laid during practice sessions. It is imperative, therefore, to go through holds many times during daily workouts until their execution becomes second nature, automatic and habitual.

IN this, his fourth article in as many successive issues, Richard K. Cole, Coach of Wrestling at Brown University, gives advice on strategy to the young wrestler preparing for a match. "What shall be my method of attack? Shall I plan to win by a fall or be content to win by a decision? Is it better to wrestle offensively and take chances, or wrestle defensively and wait for openings?" These are three of the several questions which are asked and answered in this article by Cole, who in 1931, as a student at Iowa State College, won the National Collegiate wrestling title in the 135-pound class. Both the young wrestler and the coach of wrestling will find helpful the illustrations of holds and breaks for holds that accompany this article.

When planning special offensive or defensive maneuvers, it is important to master them before using them in a meet.

Many bouts are lost off the mat; that is, before they are ever wrestled. Some men lie awake at night planning the complete match over and over again. They become nervous and upset, and as a result toss and turn, spending a restless night. This situation is usually to be found the night preceding a meet. Nothing is more detrimental. Remember that you are meeting a man your own weight, and that your chances of winning are as good as his, provided of course that you are in good shape and keep your courage alive. Try to think about everything but wrestling for twenty-four hours prior to



Richard K. Cole

the meet, although a last minute résumé of your plans just before you go to the mat is always helpful.

Elements of Victory

Many men lose wrestling matches because they attempt to throw an opponent when they should be content to win three points for their team by a decision. You may find that this holds true in your own case if you try to throw a strong adversary who is probably a better wrestler; in so doing, you may lose your advantage behind. In such a case it is best to get control of your man and keep control of him. However, a fall is always the desirable way to win and, if conditions are right, all maneuvers should be executed with a fall as the ultimate goal.

No one method of attack is defeat-proof. Too many conditions enter into each individual bout which call for changes in strategy. The attributes necessary for winning competition are many, such as top condition, speed, balance, courage and fight, will to win, complete knowledge of holds and their counters, and sportsmanship. The following suggestions are applicable to any bout.

Never try to work a hold until you secure it completely. The turning point of many bouts is a half-hearted effort to execute a hold that is only half completed. Do not rush the working of a maneuver until the time arrives for its execution. Wrestlers may know a hold and how it works, but under pressure they become overanxious and rush the issue, with the result that the grip is not completed and they lose their advantage or fall into a pinning position. Caution, alertness and relaxation are necessary. Occasionally, it may be advisable to rush your opponent, overpower him and try to pin him to the mat at once, if you know him to be an inferior beginner at the game. But, usually, carefulness and coolness are better. Drop a hold that is not working; that is, if one of your favorite grips is being stopped continually by your opponent, discard it and try others. Some men attempt a hold again and again, even though each effort is futile. This shows poor thinking during competition. Always resort to other maneuvers which will possibly remedy the situation.

Be conservative, at least till your adversary begins to tire. Use an offense which will insure coolness, carefulness and victory. When you must be on the defensive, do not give ground. Stay on the mat and fight hard and cleanly. Above all, be a good sport. Play the game and be game while you play.

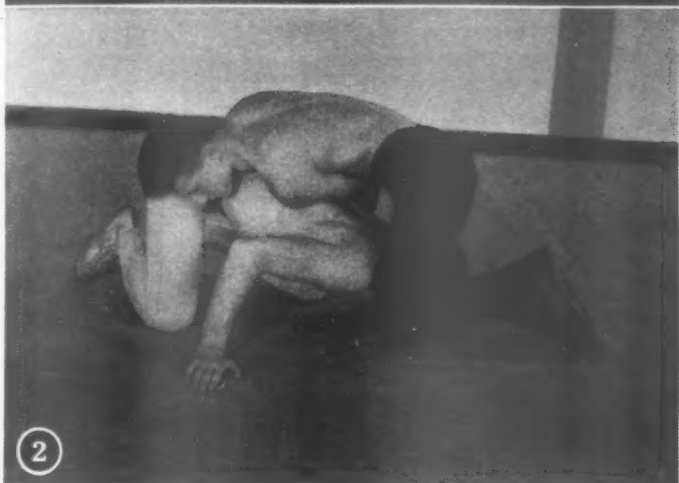


Illustration 1—This picture shows the start of the head scissors by A, the offensive man (in black trunks). Note the manner in which A is using his hands. A must keep his weight on B's shoulder.

Illustration 2—A has now proceeded to the front and put a scissors on B's head. From this position, A pulls with the wrist hold and brings B to his back.

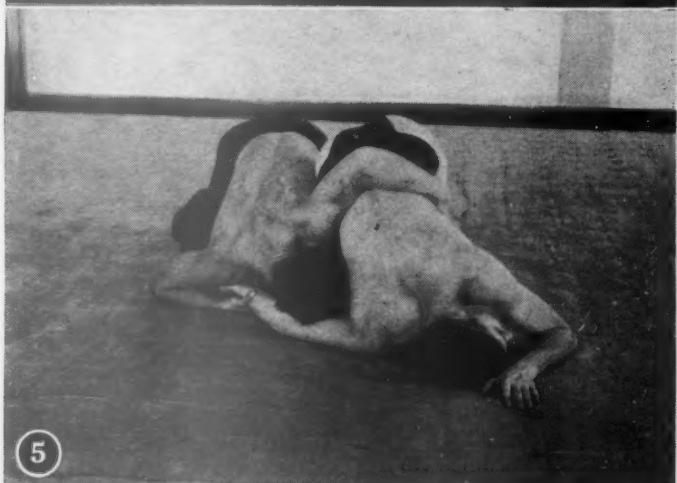
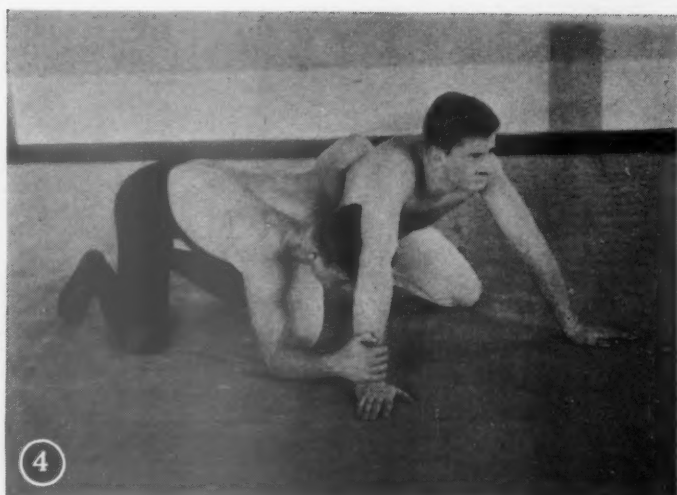
Illustration 3—A fall with a head scissors is shown in this illustration. A twists B's head up, preventing him from bridging, and grasps his leg to prevent him from kicking.

Illustration 4—This illustration shows an effective way to bring an opponent to the mat when on the knees and behind him. A grasps B's wrist and puts his head behind B's armpit.

Illustration 5—A is shown bringing B to the mat. From this position, A gets a further half nelson, continues across to the other side and secures a fall.

Illustration 6—This picture shows the start of the half nelson and crotch hold. A, the offensive man, applies a near half nelson and an inside crotch hold and proceeds to turn B to his back.

Illustration 7—A fall from the half nelson and crotch hold is illustrated in this picture. It is essential for A to get his arm completely around B's neck to keep him from bridging.



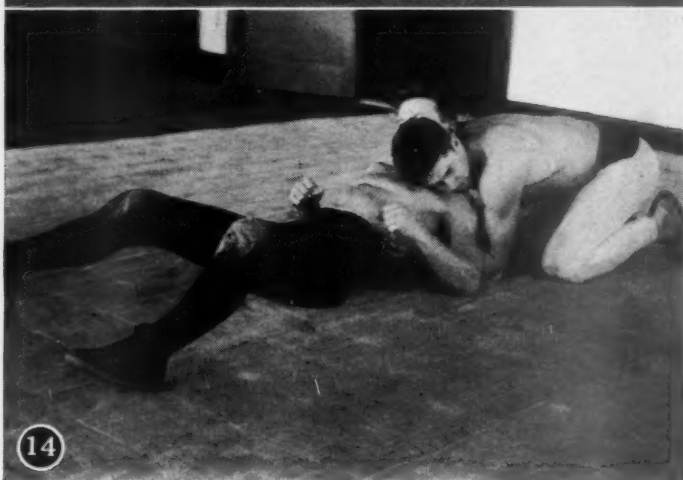
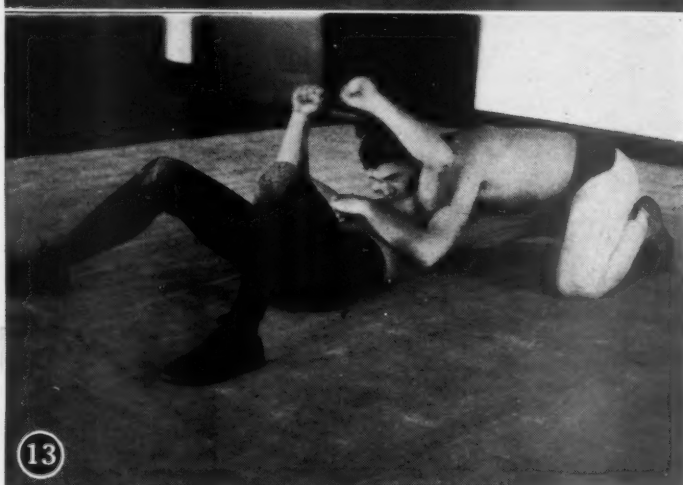
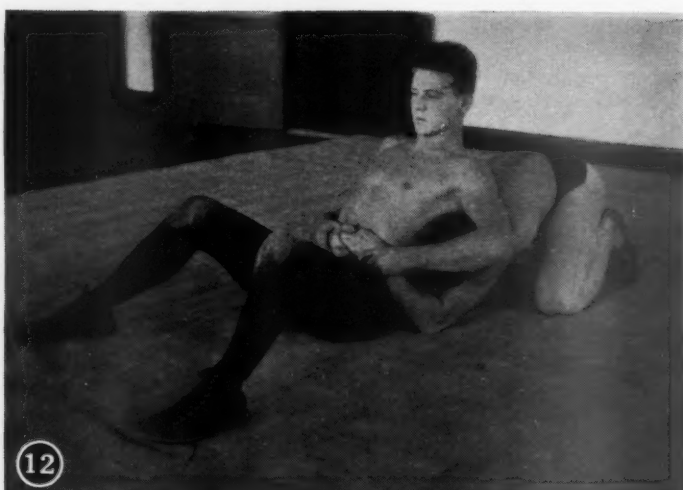
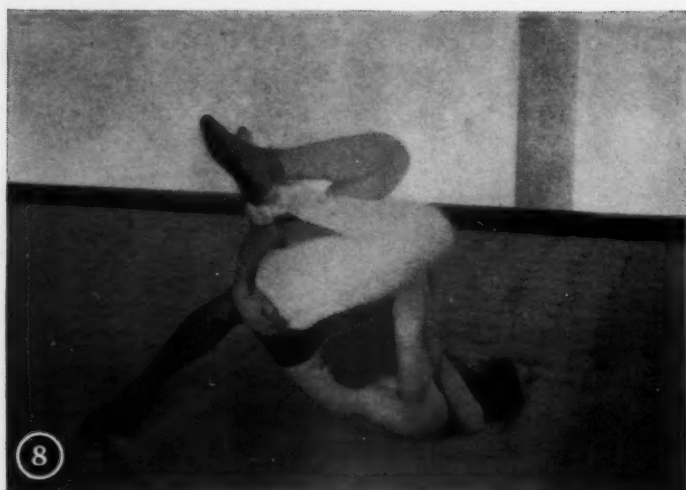


Illustration 8—This picture shows a further development of the half nelson and crotch hold. A lifts the lower part of B's body off the floor, using his knee as a brace.

Illustration 9—A cradle hold developed from a half nelson and crotch hold is shown here. A wraps his arms around B's legs from the outside, then locks his hands and tilts B to his shoulders.

Illustration 10—The break for a half nelson and crotch hold is illustrated in this picture. B pushes A up with his right hand on A's hip and slips his left hand across his own abdomen.

Illustration 11—This is a continuation of the break for the half nelson and crotch hold. B has turned into A and has his shoulder through. From this position, B keeps turning until he comes to his hands and knees.

Illustration 12—This illustration shows A starting the sit-through. A throws his body far out and grasps B's wrists.

Illustration 13—A has slid down low and pulled B's wrists high across his chest. A makes his chest as small as possible and raises his arms preparatory to breaking the grip.

Illustration 14—A has now brought his arms down hard, thrown out his chest and broken the hold. A now quickly turns and frees himself.

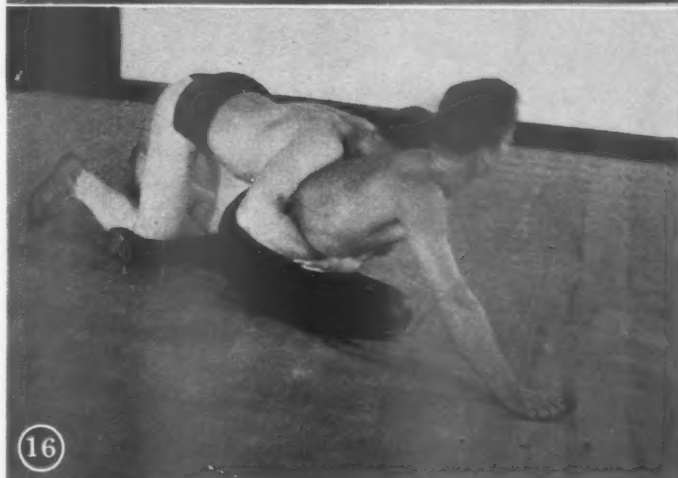


Illustration 15—This picture shows the start of a side roll to come out from underneath. A grasps B's right wrist with his left hand.

Illustration 16—A has doubled his right leg under himself and has thrown himself forward. Note that A keeps his head up high. This is most important for proper execution of this maneuver.

Illustration 17—A has now rolled B over on his back. From this position, A drops his hold and continues over on top of B to apply a half nelson and crotch hold.

Illustration 18—This picture shows the break for the reverse half nelson and crotch hold. B pushes A's head up and gets his right arm across his abdomen. Notice that A has a reverse half nelson.

Illustration 19—B is now nearly free, since he has his shoulder through. He continues to his abdomen and then to his hands and knees.

Illustration 20—This picture shows the start of the switch, a hold used to come out from underneath and go behind. A has come to a sitting position and thrust his hand into B's crotch. A leans back, putting pressure on B's shoulder.

Illustration 21—A is continuing behind B with the switch. At completion, A grasps B's farther ankle with his left arm. This maneuver helps A to control the movements of B.

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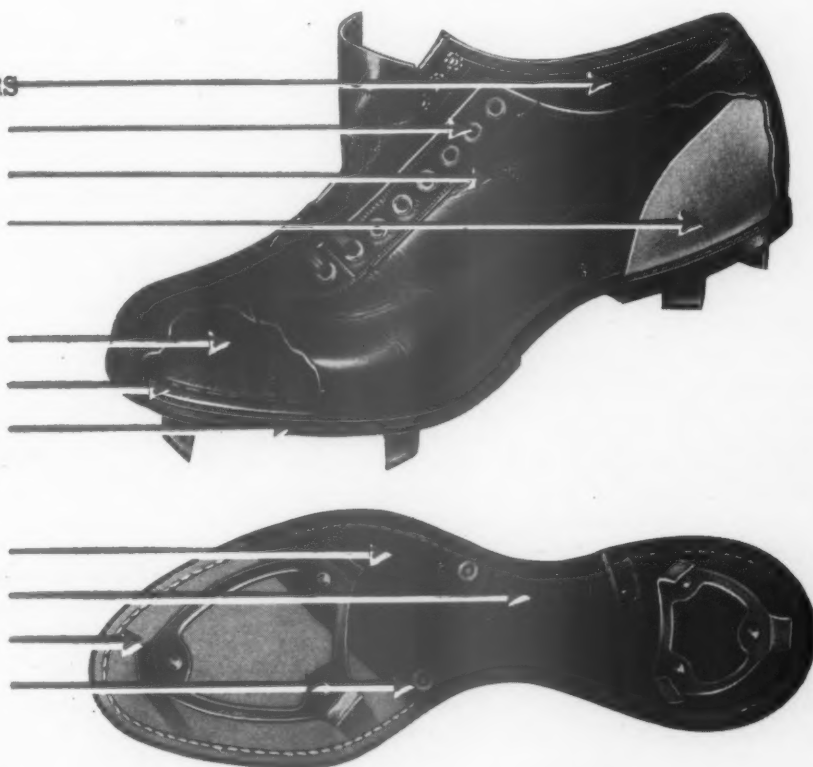
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The School Administrator Views Athletics

By A. L. Richter

Custer, Michigan, Public Schools

ATHLETICS represent an unwanted orphan who has been forced on the school, rather than a natural product of modern school organization. They have come to the school an overgrown and pampered child. They were not wanted nor tolerated in any other part of our social organization and as a last resort were brought to the doorstep of our educational institutions.

Athletics made their way into the school prior to the World War. An instinctive love for play and competition between towns and schools was the seed from which our modern interscholastic athletics grew. With the opening of school each year, boys organized their athletic teams and amid confusion and turmoil they tried to conduct their games, at the same time calling themselves representatives of their respective schools. In other words, the students of Platteville would challenge the students of Flatbush, and a game supposedly between two schools would ensue.

Early Administrative View

The period of student leadership or coaching was soon displaced by adult leadership under some local sports enthusiast or alumnus who was willing to donate his time to assist boys in their play. At about this time, school authorities became alarmed over the condition of this phase of student activity and its effect on student character and life, as well as its relation to the school. It was observed that athletics were conducted in an uneducational and roughshod manner, and that the school was getting the blame for their abuses, while in reality at that time it had nothing to do with them.

The next step was the assignment of a male faculty member, with athletic experience or knowledge, to coach the teams in order to give the school a measure of control over the situation. The chief aim of this regime was to produce championship teams, to develop All-American material and to prove to neighboring towns and schools that the local youth were much superior to anything that competitors could parade on the field. Many schools are still in this stage of athletic development.

School administrators, to a large extent, are responsible for the sad condition of many of our athletic programs. They have avoided the issue and failed to give guidance and direction to the problem, and yet all school men have been forced

to commit themselves to some type of athletic program. At present, we may segregate school superintendents and principals into three quite distinct groups in regard to their position on the athletic problem.

Group One—Opposing

We find a first group of school administrators who seem very much opposed to the high school athletic program and who cite logical and concrete reasons for their position. Their arguments sound something like this:

"Athletics do not belong in the school. It is not the business of the school to provide recreation for students and public, and there seems to be little justification for placing this unwanted and unnecessary activity in an educational institution. Athletics have many disadvantages from the standpoint of the school and few, if any, advantages.

"In the first place, athletics are poor publicity for the school. Too many colleges and schools are judged by the public merely on the basis of wins and losses of their athletic teams. The law of average dictates that over a period of years a school will lose about 50 per cent of its contests; thus, about 50 per cent of the time a large unthinking public and student body feel that the school is inferior in all respects to comparable schools. This is unfair to school authorities, students and all others connected with the institution whose business is really *education* rather than the production of super-athletes and the domination of the field of athletics.

"Athletics as they are now conducted are uneducational in effect. There is so much emphasis on winning the contest that students and players actually feel

that the winning of the game is an end in itself and superior to all other aspects of the event. Students and public lose sight of the fact that the game should be played for recreation and that in reality it should make little difference who wins so long as the participants enjoy their play.

"The game has assumed such distorted proportions in the eyes of many people that newspapers and fans shower praise on the hero until it is detrimental to his own development and in the same breath are so abusive to the loser that the latter is forever in disgrace. The manner in which the modern newspaper loses sight of the true purposes of athletics, ridicules immature boys for their athletic blunders and pampers and spoils the "star" is a disgrace to the journalistic profession and a grave injustice to the boys.

"If there are any character building qualities in athletics, they certainly cannot be developed with the tremendous public pressure under which the coach works today. He is often hired and fired solely on the basis of wins and losses, and must produce unbeaten teams to hold his position. While we are keenly sympathetic toward the coach, we are still more concerned with the effects of this program on the student.

"Athletics are a disrupting factor in the school program. Without mentioning the ever troublesome factor of bookkeeping and other aspects of eligibility, there is constantly the need for excusing squad members from school for practice sessions, first aid treatment, injuries and games to be played. Very often important games demand that the entire high school be excused and they prove a great disadvantage to the work of both student and teacher. Hand in hand with game attendance we meet a problem of student conduct, a situation practically beyond the control of the school but very often a reflecting factor on the school. During the heat of an athletic contest and especially after winning an important game, students innocently commit acts of rowdiness, destroy property and in other ways bring discredit upon themselves and their alma mater.

"Last but not least among the objections to athletics is the item of expense. Equipment is expensive. Most schools pay hospital and medical bills for players. The coach is one of the best paid members of the teaching profession. When it

IN this article, A. L. Richter, Superintendent of Schools at Custer, Michigan, discusses the viewpoints on athletics held by various types of school administrators. As a former high school and college athlete, a former coach and a school administrator, Mr. Richter has had abundant contact with many sides of the athletic problem. He holds a B. A. degree from Western State Teachers College of Kalamazoo, Michigan, and an M. A. degree from the University of Michigan. He is the author of a book, "Physical Education for Urban School and County Unit," published in 1935.



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takes from one to three men to teach a football squad consisting of from fifty to sixty candidates and one man to concentrate on five or six regular basketball players, the cost for instruction far exceeds the average cost per pupil for other subjects in the school."

Group Two—Enthusiastic

In contrast to the group who would like to omit athletics from the school program we have a group of administrators who are enthusiastic over school athletics. We summarize their major contentions as follows:

"Athletics are good publicity for school and student. Many schools and individuals would be unknown if it were not for their athletic squads. Athletics attract a group of supporters to the school who otherwise would have no opportunity to become acquainted with the institution. Most working men would never contact the school if it were not for football, basketball and spring activities. Most schools win a fair percentage of their games over a period of years, and therefore athletics are an excellent source of good publicity.

"Modern living is daily giving us more leisure and time to play. Athletics in school teach worthwhile habits of leisure time activity and are educational in effect. Athletics furnish opportunity for competition, self-sacrifice, hard work, obedience to constituted authority, quick thinking, physical development and other

qualities that are necessary for successful living.

"Athletics teach loyalty in a manner that cannot be taught in a civics class. Loyalty to a team or school will in later years mean loyalty to friends, state and nation. Co-operation on a team teaches a lesson in working with others that cannot be duplicated anywhere else in the school and which will carry over into later life. Character, education and physical development are certain to result from a program of competitive athletics."

Group Three—Tolerant

We find a last group of administrators who take a tolerant or "stand by" attitude. Probably the largest percentage of school men may be classified in this group. They recognize both the good and the evil in the present program and, realizing that the popular sentiment is too great to work against, they are merely resigned and waiting for athletics to develop along more constructive educational lines of their own accord.

These men seem to feel that many fine qualities will gradually evolve from the program in future years, provided proper leadership is applied. They point to the advances already made by state controlled athletic associations, intramural systems and up to date physical education programs. Administrators in this group are convinced that there are values in the program that the future should bring out

and that many of the undesirable aspects will be eliminated. They feel that properly controlled athletics are an integral part of education and that the day is not far distant when they will play a large part in the education of the child in spite of present day abuses. Men in this group believe in more physical activity in the school provided it is the right kind and directed toward the general aims of education.

Conclusion

Athletics are still a major school problem. When one reviews the problem from all angles, he must concede that all three groups of administrators have a host of evidence with which to back their arguments. It is the conviction of the writer after serving at various times as a college and high school athlete, a teacher, a coach and school superintendent, that men of the third group, the tolerant group, are the nearest to being correct in their viewpoint.

It should be forcefully pointed out that the problem of properly conducted, educational athletics will never be solved in the college class room, in the downtown barber shop or in the players' dressing room. It is distinctly a problem which must be solved by school administrators in the field and on the job. They alone are the ones with sufficient background and authority to go ahead and make athletics educational.

Basketball Ethics

By Raymond W. Hanson

Western Illinois State Teachers College

LET me quote an outstanding superintendent of schools in Pennsylvania on the requirements of an athletic coach.

"The coach of a competitive team has a most important task—he means so much to the school, the boys and the public. There are several fundamental questions that should be asked about a man before he is intrusted with the responsibility of coaching boys. What manner of man is he? How does he speak and act? Is he sound and clean in mind, so that his influence is inspiring and uplifting? Would he set a fine example, not by posing but by being the type of man we want each of his boys to be? If these questions cannot be answered favorably, stop then and there. No other qualities can supplant the fundamental qualities of character."

The Men Who Coach

Surely the athletic coach of today must measure up to rigidly high standards of both education and essential manhood. Any profession so exacting and so demand-

IN reporting for the Committee on Ethics at the last annual meeting of the National Association of Basketball Coaches, held in New York City, April 1-3, 1936, Raymond W. Hanson outlined the most common violations of basketball ethics as learned by his Committee from coaches throughout the country. Presented here is an extract from his report. Mr. Hanson is Director of Athletics at Western Illinois State Teachers College at Macomb, where he takes an active part in coaching basketball, football and baseball.

ing as coaching must be built upon the bedrock of education and must continue to grow and elevate itself to constantly higher planes.

Ethics! That word includes the code, the rules and the orders of our profession with something else added, our attitude. These ethics or practices can be no higher than the men who make up the basketball coaching profession.

We are not going into great detail in

the discussion of what constitutes ethics and the part that coaches play in them. Suffice it to say that we want to discuss some of the things which are coming up in our profession that might not be in line with educational principles.

Coaching from the Side Lines

First of these is coaching from the side lines. What is coaching from the side lines? Can you answer that question? Do you coach from the side lines? Is conveying to your players the length of time remaining in a ball game coaching? If you yell at one of your players as he goes by, is that coaching? These are questions that you coaches must answer. Do you give a signal from the bench for a certain play, or for a change from a fast-breaking attack to a slow attack? We do not believe that we should try to move the boys about on a court as though they were pawns in our hands, do we?

Now, there is a difference in coaches. We have had an opportunity in the past two years to check the coaches in the Big

Ten Conference. There are one or two who sit quietly and unperturbed on the bench. But most of them move about, yell, stand up and react to the way the play is going on the court. We know that some of our outstanding coaches in basketball have a reputation for going through various antics during the procedure of a game. Is this just a matter of temperament, and should we condone this type of practice? I don't believe that we can reprimand these coaches for that type of action, because they are not trying to coach from the bench; their temperament will not allow them to sit still.

Harassing Officials and Players

Do you attempt to harass or intimidate an official? What is meant by this? This might be referred to as blackmail. Blackmail is extortion by threats of accusation. An example of what I mean is when a coach talks to an official before a game or between the halves, explaining to him certain phases in the rules that he thinks should be emphasized in that particular

game. Is this ethical? What do you think about it?

By far the worst violation of ethics is the practice on the part of a few coaches—not spectators, but coaches, mind you, in universities, colleges and high schools—of putting pressure on the outstanding opposing players by saying something to them as they go by the bench. That is, a coach selects the star player on an opponent's team and passes some nasty remark directed toward him with the idea that this remark will affect the boy's ability to play ball. Is this ethical? Isn't this beneath a coach? Can such practices be placed in the category of education? If a coach is a leader of virile, clean-limbed, clear-eyed young men, should he perform in such manner?

Some coaches play the "army game" and withhold their agreements on both officials and game contracts until it is almost time for the contest. Thus the best officials are not available. This is a bad practice. Of course, where we have conference rules, and officials are selected by a commis-

sioner, this practice is seldom encountered.

Booing! We should curtail it. Several reports have come in of instances in which the coach has tried to control the sympathies of the crowd by giving a lecture before the game through a loudspeaker, and then afterwards, by his own action and personality, has incited the crowd to such an extent that he has made the situation worse.

These five suggestions that have been presented are the most important that have been brought to our attention. Are we going to do anything about them? If you were a lawyer, would you condone shady practices by members of your law firm? There is no reason why a president of any university or college, or superintendent of a high school, should allow a coach to do anything that injures an educational institution. What are we going to do about these suggestions? Are we going to wait until such time as some administrator in education questions practices of this sort? Or are we going to correct them ourselves?

Chaos or Co-operation in Intercollegiate Athletics

By R. L. Sackett
Pennsylvania State College

IT is generally accepted that intercollegiate athletics as well as intramural sports may make a very definite contribution to our educational program provided that the objectives are in harmony with the best traditions and purposes of our colleges and universities. In THE ATHLETIC JOURNAL for September, 1936, W. H. Browne of the University of Nebraska wrote in his article on "Interscholar Sports in the Educational Program," "If we are successful in building the right kind of men there will be no social problems, no economic problems, no political problems." Our educational program from the bottom to the top should conspire toward the attainment of this desirable, if millennial, purpose.

Current Conditions

Do college sports contribute to such a purpose? In many regions there is such careful control of intercollegiate sports that many of the detrimental features have been eliminated, largely through the general acceptance of regulations in the spirit of good sportsmanship rather than through fear of some form of punishment for infraction of rules. There are cases, however, in which "gentlemen's agreements" fail to attain the high standards that are generally desired and that are in

A GRADUATE in Civil Engineering of the University of Michigan in 1891, Dean R. L. Sackett has for many years been a close follower of athletics. While a college student, he became interested in boxing as the result of an illness resulting from lack of exercise. In his first teaching position, he assisted in the coaching of the athletic teams of the college. As a member of the faculty at Purdue University, he was on the Athletic Board of that institution. Named Dean of the School of Engineering of Pennsylvania State College in 1915, he has for over ten years been a member of the Advisory Board of Athletic Control in that institution. In quoting W. H. Browne in his article, Dean Sackett wishes it understood that criticism is not intended.

the main avowed by collegiate institutions.

This past year college football seems to have aroused more charges of duplicity and professionalism than in previous years, which may be a sign of returning financial prosperity, but which is at the same time the cause for apprehension concerning the decency of college football ethics. It is difficult to tell how much truth there is in current rumors, but the charge that the services of a well-known All-American were purchased in the open market, and that the institution which was outbid is now complaining of the fact, leads one

to believe that there must be something "rotten in Denmark."

Mr. Browne in the article mentioned above also wrote that "it is imperative that the boy have the laboratory training in carrying out the precepts we give him." In the main, the ideals of our leading football coaches are undoubtedly excellent, but the laboratory or football field does not demonstrate the best ethics of sport. The players know when some are paid more than others. Many students receive no compensation at all in any form, and to play under these circumstances in competition with those who are rumored to be professional shows a high degree of tolerance, even though the laboratory demonstration seems to be lacking.

Athletic Code

The National Collegiate Athletic Association has attempted to set standards according to the expressed desires of the majority of those responsible for the conduct of college athletics. Its code is simple and straightforward. An institution which invites or condones paid players knows that it is deliberately setting itself against amateur contests.

The purpose of the N.C.A.A. code is to obtain a fair basis for sports competition in harmony with college standards of

ethics. The Association is not imposing its will, but serves as the medium of expression for the majority of those deeply concerned with fair practices. The code may not be the best, but one effective way to defeat the motives of college education is to teach double dealing, duplicity and dishonesty. The athletic program should serve the primary educational purpose, which is to prepare students to be

worth more to society. The present state of intercollegiate football seems to defeat this objective, if by example it says one thing and does the contrary.

If we cannot co-operate to improve the code of fair competition and we continue in attempts to defeat, by unscrupulous methods, amateurism as now defined, we are only defying one of the main purposes of education, which is honestly to face

hard problems and to solve them by open, honest discussion and unprejudiced fair dealing.

In those areas where conferences are lacking in conviction and courage, will it be necessary to have some form of official black list in order to save football from disgrace? The gentlemen's agreement has failed to cure the disease of commercialism.

Scholastic Achievement and Physical Efficiency

By Winfield S. Angus

Eastern Illinois State Teachers College

THE interest of educators, coaches and directors of physical education has long been centered in the problem of scholastic achievement and physical efficiency of pupils who participate in athletics as compared with the scholastic achievement and physical efficiency of pupils who do not participate. Many studies have been made which do not consider the factor of physical efficiency. These have proved to be of great interest and have revealed some very pertinent facts. The study presented in the following pages has taken into consideration the factor of physical efficiency.

The problem involved is to determine, if possible, the effect of participation in athletics on scholarship achievement of participants, as compared with the scholarship achievement of the non-participants, and, in addition, the physical efficiency of both groups. The institutions involved in the study were the Champaign, Urbana and University High Schools, all located in Illinois. The pupils concerned in the study consisted of 79 athletes and 310 non-athletes.

The Problem

The questions to which the study attempted to seek answers are as follows:

1. How do the pupils who participate in athletics compare in general intelligence with the pupils who do not participate?

2. What is the effect of participation in athletics, indicated by the degree of correlation between the intelligence scores and school marks of the participating group as compared with similar correlation drawn from the non-participating group?

3. Is there a material difference in scholastic standing between non-athletes and athletes?

4. If such a difference in scholastic standing exists, is it in favor of or against the athletes, is it due to competitive athletics directly or remotely, or is it due to differences in innate mental powers?

5. Is the scholarship of the athletes materially different from that of their classmates?

6. What is the relationship of the physical efficiency of the participants and non-participants in athletics to the scholastic achievement of each group?

The Procedure

In order to distinguish between the participants and non-participants in athletics the following criteria were set up. The term "athletes" is used to mean those pupils who participated or who had an opportunity to participate in football, baseball, track, basketball and other sports commonly considered interscholastic sports and who had won letters or numerals in these sports or were carried on the squad through the season in which the sport was featured. The term "non-athletes" was used to designate those boys who did not participate in interscholastic athletics.

The term "physical efficiency" is taken to include those muscular reactions and

manipulations of the body which are measured by the Brace Motor Ability Test and by other physical capacity tests such as are given in Whipple's "Manual of Mental and Physical Tests" and a functional test which is a modification of D. A. Sargent's Jump Test. The term "scholastic achievement" is used to designate the grades attained in various school subjects and the Army Alpha Examination, Forms 8 and 9.

The tests were administered in the following order: (1) physical capacity test, (a) vital capacity, (b) strength of grip, (c) strength of back, (d) strength of legs; (2) Brace Motor Ability Test; (3) functional test; (4) Army Alpha Test; (5) compilation of school grades from the principal's office. After all the test material had been obtained, the data for only those subjects who had completed all of the tests were considered in the final computations. Thus, while the number of cases given here appears to be small, there were approximately 920 non-athletes and 100 athletes who took the various tests. It was thought advisable and expedient to include only those cases which had actually completed all the tests given to secure a representative basis for comparison. The result was that out of the total number tested there were complete records of 79 athletes and 310 non-athletes available for consideration in the problem.

The statistical procedure employed to find the relationship between two variables was the correlation table method given in C. W. Odell's *Educational Statistics*,¹ from which were obtained all other methods concerning statistical procedure that was followed.

A general summary of the data is shown in the table.

The Functional Test

The functional test, as it is called in this article, was thought to be satisfactory for



Winfield S. Angus

¹Odell, C. W., *Educational Statistics*, New York, The Century Co., 1925.

the purpose of collecting data relative to the ability of the individual to perform a prescribed muscular activity that more or less involved the use of the whole body.

This test is considered of importance as a try-out of strength, speed, energy and dexterity. The test as used employs a succession of five vertical jumps made with as little pause between jumps as possible.

The test as used does not depend upon bodily measurements or acquired athletic ability; thus all subjects were placed on the same basis. It was found that those individuals trained in skills of various athletic sports were not insured of a high score, nor were those lacking skill in a particular athletic sport insured of a low score.

The writer is convinced that the test should measure the inherent quality of vim, vitality, driving power or the "will to do," considered very essential and significant in the composite term "physical efficiency."

The functional test devised and applied in this study is as follows: Headgear was placed on the subject's head and the chin strap securely fastened under the chin. A paper was placed on a slide and a base line drawn as the individual stood on a designated spot under an arm from which the headgear was suspended. Each individual jump was recorded from the base line. The subject was instructed as follows: "Stay on the mark while jumping. Jump as high as possible and as fast as you can. Crouch a little, but only enough to relax the muscles of your legs and back. Jump as high as you can. Make five jumps in succession. Steady, go! Stop!" Emphasis was placed on the swinging of the arms forward as the subject moved upward, and downward as he returned to the floor. The method of jumping was demonstrated before all the subjects. The motion of the arms was designed to use as many of the muscles as possible and standardize the jumping form.

The purpose of the jumping device was to record the heights of successive jumps on a sheet of record paper attached to the sliding panel. After completing the five jumps the record sheet was removed, thus giving a record of the individual's performance. The height of each jump was then measured in centimeters, and the average of the jumps taken and used in the computations and scoring.

The formula for deriving the functional index is as follows:

$$\text{Index} = \frac{\text{average jump} \times \text{weight}}{\text{age} \times \text{height of jumper}}$$

Correlations Between Tests

The school marks for the athletes and non-athletes were obtained from the records in the office of each school, and the letter grades in order to standardize computation and give a more favorable method of comparison were converted into

points as follows: A—5, B—4, C—3, D—2, E—1.

The results as indicated from the physical capacity test showed that the athletes, as far as physical efficiency is concerned, far outranked the non-athletes. Moreover, it appears that weight, height and age are important items concerned in the physical efficiency of students. Within limits, the closer the individual approaches maturity, the greater the physical efficiency. The

WHILE attending Central High School of Newark, New Jersey, Winfield S. Angus was a member of the track and cross-country teams. He won the National Interscholastic 440-yard title in 1916. During 1917-19, while a member of Battery C, 112th Field Artillery, 29th Division, he participated in football, baseball and track. He was a member of the relay team which won the Château-Thierry to Paris cross-country race in 1919. Between 1929 and 1931, he was playground director of the Rockford, Illinois, Park District, and between 1930 and 1932 was Director of Physical Education at University High School, Urbana, Illinois, where he coached basketball and track. In 1932, he went to the Eastern Illinois State Teachers College at Charleston as Director of Physical Education. In addition to his administrative duties at this institution, he has coached various sports. At the present time, he is coach of cross-country and track. He holds both bachelor's and master's degrees from the University of Illinois.

athletes who are football players seem to be, as far as physical efficiency goes, far superior to those athletes participating in other sports.

The data reveal that there is a positive correlation between physical capacity and functional capacity, but the data seem to indicate that the athlete has very little, if any, advantage over the non-athlete in the ability to perform in the functional test.

The data here obtained show that the correlation between intelligence, as measured by the Army Alpha Test and the Brace Motor Ability Test, are in the case of both athletes and non-athletes negative and practically negligible. The size of the probable error is not in most cases such as to indicate fully satisfactory statistical reliability.

It has been stated that the athletes seemed to have little advantage over the non-athletes as evidenced by the correlation obtained between the physical capacity test and the functional test, yet in every case, as indicated by the mean scores of the athletes and the mean scores of the non-athletes, the athletes ranked higher than did the non-athletes. The functional test would seem, in view of these facts, to indicate that the athletes benefit from their physical efficiency in their ability to present a better performance on the whole than do the non-athletes. The element of competition may be a spur to further ef-

fort and thus a better performance, and yet the difference in the mean score is so slightly in favor of the athlete that one may be safe in stating that his physical superiority is not so great as to be of much advantage.

There seems to be a small positive correlation between the Brace Motor Ability Test and the functional test, as might be expected. The results, on the whole, indicate that tests of a similar nature bear out the fact that there is a positive correlation.

As regards the correlation between the Army Alpha Test and the physical capacity test, there is indicated a negative correlation, and there is no coefficient of correlation three times its probable error. Thus, while the coefficients of correlation follow the general trend of being negative in the case of mental and physical traits, they are not of a degree of reliability to be considered from the statistical standpoint. From the data obtained here, we should be safe, however, in suggesting that apparently the intelligence of one group does not exceed that of the other group and that there are other factors that influence the situation.

The results of the correlation of the Army Alpha Test and the functional test show a negative coefficient and thus again uphold the assumption that this is the trend of such tests.

An analysis of the data concerning the correlation of the Alpha Test and school grades shows that the coefficient of correlation as obtained in both groups from each of the high schools is positive and on the whole is presumed to be indicative of statistical reliability, for in most cases it is three times that of its probable error. There is then in the light of the data offered here a reiteration that intelligence and school grades correlate in a positive fashion.

Although there is a variance indicated in the groups within each high school, there is the indication that the athletes in the main are equal in intelligence to the group comprising the non-athletes. It may be assumed, also, that because of the smaller number of cases in the athlete group the higher rating is influenced by the fact that this group may be a more selective one. The fact that the non-athlete group and the athlete group of the University High School rate higher than the groups of the other two schools may be the result of the greater emphasis on scholastic attainment and limited athletic competition in the former school so that more time may be spent on the subjects of the curriculum.

If we examine the mean score made on the Alpha Test by each group from the three high schools, it is found that the athletes in the main have the highest scores. In the University High School, it is found that the non-athletes and athletes have a higher score than the same groups in the other high schools. This may indi-

cate that the groups in the University High School are more selective than those in the other two schools. The writer recognizes, however, that the number of cases in the University High School is small, and therefore the data may be affected by this limitation. However, there is reason to believe that this selectivity as to intelligence would be found if a larger group could be used in the study.

Further analysis of the data shows that the coefficient of correlation for the physical capacity and functional test with the school grades is negative, that the measure is not three times its probable error and, therefore, according to good statistical procedure, not of great import as to its reliability. It is not possible to give a full detailed analysis of the results tabulated, but the reader may, if interested, search out the facts for himself.

In general, it will be noted that the athletes have a higher coefficient of correlation than the non-athletes, and this may indicate that physical capacity influences intellectual effort or that intellectual effort influences physical capacity.

It is found that the non-athletes have a higher correlation than the athletes. The assumption is that in this test there are certain elements that do not depend upon those physical traits which are found in the make-up of athletes, but rather that intelligent application to direction and interest have some influence on the results.

Need for Further Tests

The writer has the feeling that there is need of a type of test that will give more valid results than the tests herein used, for it seems in the light of the data collected in this study that motor activity and mental activity have, if viewed from the physiological and psychological standpoint, more in common than the tests now used indicate.

In comparing the mean scores made on the Alpha Test and those made in school grades for the non-athletes and athletes of the schools under consideration, the results run parallel in that the athletes have a higher mean score on these tests than do the non-athletes, and the non-athletes of the University High School rank higher than do those of any of the other groups in the three high schools. But, as stated before, the fact is taken into consideration that both the non-athlete and athlete groups of this school are small, a fact which may have some influence on the results. There is this fact to be recognized, that such schools as the University High School do not participate in so many types of competitive athletics as do the other type of high school and, therefore, more time may be spent on school subjects. Again this matter of selectivity may have some influence, for the students of such high schools are presumed to be of a more intellectual type, and therefore athletes in such schools would attain higher scholastic

achievement than the athletes of other schools.

It is felt, however, in the light of the data here gathered that as far as athletes and non-athletes are concerned, there is little difference in the scholastic attainment or intelligence and that in a study involving a larger number of cases the results would confirm and run parallel to those submitted in this study.

Scholastic Standing

The question is often asked, "Is there a material difference in scholastic standing between athletes and non-athletes?" Then there is the corollary, "It seems impossible that athletes could do a high grade of work while spending so much time in training and contests." The following data have been collected and incorporated in the study in order to throw some light upon these statements and also to answer the questions as stated in the definition of the problem.

The marks of the athletes and non-athletes were obtained in each of the high schools from the records in the principal's office. If we consider the case of English, we find that the athletes of Urbana High School have a lower per cent of E's but a

higher per cent of D's; likewise a higher per cent of C's and B's, although there are no A's among this group.

In mathematics, the athletes have a lower per cent of A's, a higher per cent of B's and C's and a lower per cent of D's than the non-athletes of the same school. This would indicate that on the average the athletes rank as well in this subject as all the other boys.

In history the data show that the athletes have fewer A's and no E's, with a higher per cent of B's and C's and D's, which might indicate that on the whole this group spends less time in preparation than the non-athletes, because of participation in athletics.

The languages show a somewhat different trend in that there are no A's or B's among the athletes, but a larger per cent of C's and fewer D's or E's. This may indicate, as in the case of history, the lack of time spent on preparation necessitated by participation in athletics.

Records in the field of science reveal that the athletes on the whole have lower grades than the non-athletes, with a larger per cent of E's indicating that laboratory subjects requiring time suffer from the hours spent in competitive athletics and training.

SUMMARY OF CORRELATIONS OF THE VARIOUS TESTS USED IN OBTAINING DATA

Correlation of	NON-ATHLETES			ATHLETES		
	Champaign High School	Urbana High School	University High School	Champaign High School	Urbana High School	University High School
Brace Test and Army Alpha.....	r. -.135 P.E. ±.044	r. -.129 ±.080	r. -.162 ±.111	r. -.037 ±.109	r. -.011 ±.134	r. -.082 ±.163
Brace Test Mean Score.....	58.10 P.E. ±.433	58.95 ±.645	56.10 ±.883	57.90 ±.1015	64.50 ±.192	62.18 ±.513
Brace Test and School Grades.....	r. -.110 P.E. ±.069	r. -.045 ±.082	r. -.481 ±.085	r. -.072 ±.109	r. -.440 ±.109	r. -.210 ±.075
Brace Test and Physical Capacity..	r. +.197 P.E. ±.041	r. -.258 ±.075	r. +1.92 ±.108	r. +.189 ±.155	r. +.580 ±.087	r. +.770 ±.068
Brace Test and Functional Test....	r. +.166 P.E. ±.058	r. +.223 ±.076	r. +.163 ±.112	r. +.289 ±.150	r. +.122 ±.130	r. +.034 ±.173
Alpha Test and School Grades.....	r. +.320 P.E. ±.042	r. +.250 ±.031	r. +.490 ±.084	r. +.528 ±.112	r. +.119 ±.133	r. +.560 ±.112
Alpha Test and Mean Score.....	85.40 P.E. ±1.18	73.55 ±1.79	101.3 ±2.65	88.10 ±2.30	80.90 ±3.10	99.30 ±6.38
Alpha Test and Physical Capacity..	r. -.005 P.E. ±.004	r. -.071 ±.080	r. -.118 ±.089	r. -.098 ±.156	r. -.294 ±.117	r. -.340 ±.156
Alpha Test and Functional Test....	r. -.143 P.E. ±.043	r. -.142 ±.079	r. -.035 ±.112	r. -.028 ±.159	r. -.247 ±.124	r. -.330 ±.154
School Grades and Physical Capacity..	r. -.006 P.E. ±.046	r. -.279 ±.076	r. -.016 ±.166	r. -.009 ±.155	r. -.390 ±.109	r. -.190 ±.192
School Grades and Mean Score.....	2.88 P.E. ±.042	2.79 ±.065	3.77 ±.110	2.88 ±.082	2.97 ±.113	3.06 ±.185
School Grades and Functional Test....	r. -.056 P.E. ±.048	r. -.265 ±.076	r. -.287 ±.101	r. -.041 ±.158	r. -.050 ±.128	r. -.180 ±.168
Physical Capacity and Functional Test	r. +.215 P.E. ±.042	r. +.467 ±.063	r. +.025 ±.160	r. +.053 ±.156	r. +.143 ±.129	r. +.250 ±.163
Physical Capacity Mean Score.....	549.7 P.E. ±10.78	531.7 ±8.02	550.3 ±10.51	701.7 ±9.21	748 ±12.75	604.2 ±15.31
Functional Test Mean Score.....	.007 P.E. ±.0017	.010 ±.0001	.011 ±.0002	.012 ±.0003	.012 ±.0003	.012 ±.0003

From the data given, it would indicate that the athletes do not take "snap courses" as sometimes is stated by those considering the scholastic ability of boys in athletics. The evidence in this particular study indicates that the athletes succeed about as well as the non-athletes in academic work and need little or no extra coaching in order to participate in competitive games. The facts would as a whole indicate a wholesome trend in athletics and competitive sports.

While the analysis for the other two schools is not given here, the trend in subject attainment runs approximately parallel to that in the University High School. The study shows the general tendency in each instance, and the evidence is sufficient to warrant the assumption that the number of cases involved does not influence the results greatly. The athletes, while not showing superior scholarship, show that, on the whole, they make the best of their ability to do school work in subjects that are not electives but required subjects. Also, due perhaps to the fact that a certain standard of scholarship must be maintained in order to participate in competitive athletics, there is an incentive to accomplish the work and thus bring about higher scholarship.

The results obtained by comparing the Alpha Test and the school grades indicate a high coefficient of correlation. It may be assumed that there is very little difference between the non-athletes and athletes in the matter of school work and intelligence.

Participation in athletics seems to have little effect on the caliber of school achievement.

Interpretations and Conclusions

In the definition of the problem, certain questions were propounded. The answers were to be derived through the development of this study.

The data given in this study indicate that the participants in athletics rank in intelligence about as high as those students not participating in athletics. It was seen in the Army Alpha Test, which was used to determine the intelligence of the non-athletes and athletes, that the athletes as a group had a higher mean score than the non-athletes, viz., 88.10, 86.90 and 99.30, in the Champaign, Urbana and University High Schools, respectively, while the non-athletes had a mean score of 85.40, 73.55 and 101.3. The data seem to indicate that the athletes are only slightly lower in intelligence than the non-athletes. This would tend to point to the probability that the number of athletes making a high score is larger than the number making a low score. The athlete group appears to be somewhat selective.

The effect of participation in athletics, as indicated by the degree of correlation between the Alpha Test and school marks, seems to favor the athletes. There may be the possibility that because the athlete is called upon to use his intelligence in various situations, and because he is in a select group, he is spurred on to work according

to his ability. The fact that a certain standing must be maintained in order to compete is without doubt an aid to better scholastic achievement.

The athlete apparently does just about as good work in the participating semesters as he does in the non-participating semesters. It is evident that participation in athletics disturbs to some extent the normal careers of some participants.

It may be said that the difference in scholastic standing, although small, is probably in favor of the athlete. The data indicate that athletics act as a spur to scholarship in that the individuals do not want to be dropped from the squad and appear as failures to the student body. The conditions as indicated in this study suggest that the educational attitude be one of encouragement toward participation in athletics and used as a means to an end.

The correlations obtained in the various tests seem to indicate that they are in accord with the data revealed in other studies analyzed and reviewed. The data obtained in this study seem to run parallel to those obtained in similar studies, and this similarity would tend to indicate that the data are fairly reliable. The data on the whole seem to point to the fact that physical efficiency of the athletes promotes a better chance of obtaining a higher scholarship and that while the non-athletes in some instances attain a higher scholastic standing, they probably could achieve much better standing if their physical efficiency or capacity approached that of the athletes.

Athletic Diagnosis

By Stewart A. Ferguson

Arkansas Agricultural and Mechanical College

DIAGNOSING is the weakest rung in the average coach's ladder of success, excepting material and the schedule. Both of the latter are generally determined by school enrollment, ideals and policy; but diagnosing, the phase of athletic work richest in satisfying results, receives oftentimes far less attention.

Theory, technique and conditioning methods have monopolized the curriculum of most coach-training courses and schools. We have been taught the theories of man-to-man and zone defense, the correct technique of blocking and tackling, and the conditioning methods of the best trainers.

Need for Diagnosis

More than these things, we have needed perceptive skills and tests to enable us to choose quickly between the "morning glories" and the boys who will carry on successfully through our toughest games. We have needed usable and reliable procedures in locating weaknesses in our of-

fense and defense. And we have looked to a sky of imaginative clouds when we have needed athletic barometers and thermometers indicating probable success or failure.

It has been more important for me to know whether my line-backer can "take it" for sixty minutes than to know the play that won the last Rose Bowl game. I would

much rather know whether my scoring forward will tighten up and miss set-ups in our closest games than to know the respective merits of the shoulder and hook passes. I would trade all pre-game menus for the knowledge of whether my best punter can kick successfully with a couple of two-hundred-pound tackles charging in on him.

When I started coaching, one of my "wonders" was why some coaches won consistently after sharing with others their best plays, their favorite techniques of blocking and tackling, and their most inspirational dressing room speeches. The wonder grew when I saw games between teams of apparently equal ability, with victory going decisively to the team coached by the man who seemed to have the "magic touch." Then the wonder became knowledge when one of our great coaches walked out on my football field one afternoon and in a few moments of diagnosis changed my team from an ordinary one to one of championship caliber.

FOR a number of years, Stewart A. Ferguson has carried on extensive tests in athletic diagnosis. He summarizes here his experience in this field. A graduate of Dakota Wesleyan University, Mitchell, South Dakota, Mr. Ferguson spent five successful years at his alma mater after a few seasons of coaching in the high schools of Lake Charles and Alexandria, Louisiana. Since 1934, he has been located in Monticello, Arkansas, where he is now Dean of Men as well as Director of Health and Physical Education in the Arkansas Agricultural and Mechanical College.

Each year the belief is more conclusive with me that the greatest difference between the outstanding and mediocre coach lies in his ability to diagnose. The consistency of diagnosis as a basic element of success may be seen in such other fields as medicine, business, politics and religion. It has been and is a fundamental in success.

Diagnosing, in its simplest definition, is forming judgments by use of scientific determination and critical scrutiny. Athletic diagnosis is forming judgments as to the probable reactions of an athlete or athletes to certain situations and stimuli.

Principles of Diagnosis

A first principle of diagnosis to keep in mind is that the more similar the diagnosing situation is to the actual situation, the more accurate will be the diagnosis. For instance, if I were trying to find out how far my punter will kick in the next game, I should probably rush a defensive team at him and then measure the distance he had kicked.

A second principle to remember is that we are dealing with human and variable elements rather than with circles and crosses. Most of us remember the time we went to bed the night before a game, secure in the feeling that our two-hundred pound fullback who ran the hundred in 10.4 seconds would gain more yardage than our opponent's fullback who weighed only a hundred eighty pounds and couldn't do the hundred under 11 flat. Twenty pounds advantage in weight and six-tenths of a second in speed seemed like a worthwhile advantage—until the next afternoon. We'd forgotten that our fullback had a sensitive left eye which caused him to shy into a swarm of tacklers all through the game.

A third principle is specific determination of those abilities which we believe will make winning football and basketball players for us, and diagnosing for them rather than for unrelated and non-essential qualities. It is immaterial to me whether my scoring forward has eight or eighteen inch biceps, but it is mighty important for me to know whether or not he has peripheral vision. It is not valuable to me to know that my football squad has an average speed of 11.2 seconds for the hundred, but I want to know the first day of practice whether I shall find eleven men who can run fast for the first ten yards.

Space in one article is far too short to give methods and procedures in diagnosis. Rather, I will short-cut this phase and jump to the ultimate aim—the making of practical tests which we can and will use.

Individual Tests

Scarcity of simple and practical tests indicates our greatest need in the field of athletics and physical education. We need athletic Schick tests, physical seismograph tests of athletic ability and human weighted

indexes for football and basketball players.

I shall state some of the qualities I look for in my athletes and describe a few simple tests which, I realize, will probably qualify me for the kindergarten class in tests and measurements.

In football, I first look for players who can run fast for the initial ten yards. Using quick opening plays, mixed with deception, I need speed, and I need quick bursts of speed most when the players are worn down in the hardest game of the year.

I have used the most elementary of tests in locating this quality. Standing in the center of the field, I instruct my players to trot around me in a scattered group. At the command, "Hike!" I ask them to speed up for about ten steps and then drop back into their trot. The command, "Hike!" is repeated at intervals, and each time I note the men who show a distinct increase of speed. I continue the test until the percentage of men showing increase of speed has dropped to suit my fancy. The test is repeated at various times during the season. I have used the test in basketball also with some success.

The following test I have used to determine my slow learners and to locate players who have a tendency to tighten up when the psychological tension becomes intense in our closest games. We have all had players who invariably fail when the count is fourth down and a yard to go or who muff the winning set-up in the overtime game. Two drills of about equal difficulty of execution are given. In one drill, I tell the boys how easy it is, encourage them as they go through it and compliment their efforts. In the other drill, I exaggerate the difficulty of execution, criticize all the boys doing it and mournfully regret each attempt as it occurs. In addition, I add a mental hazard by limiting the execution to a space which is narrow, but never narrow enough to interfere with any average attempt. By checking the reactions of the players, I quickly learn my "game" players in most cases.

In locating my best ball-carrying backs, I have made fewer mistakes than in other phases of my work. My candidates are taken downtown in small groups on a Saturday night or at some other time when the sidewalks are crowded with people. By watching their ability to progress through a crowd, I can learn their sense of timing, their ability to adjust their movements quickly to a multitude of different and varying situations. It generally takes but a few moments to discover hidden ball-carrying talent.

Another test which indicates whether a ball-carrier can be trained to be a shifty or driving runner is to have him come slowly toward me. As he comes within reaching distance, I jab my right hand on to his right shoulder, instructing him to make a

complete backward turn with his body and swing to the left as wide as possible as both his right and left feet touch the ground. His skill and the distance he makes to the left have been a criterion to me which has failed but few times.

I try to discover my best and "gamest" tacklers the first day we use the tackling dummy. As they drive for the dummy, I either attempt to knock them off balance with a jab on the shoulder or I hook on to them and let them drag me as they go into the dummy.

The two-on-one drill for linemen as a test for aggressiveness has been used so often that I will make no more mention of it here.

Some readers may be wondering why I have not used tires, stiff-arming posts and other common devices for football drills. Of course, the reason is that there is a difference between testing and developmental drills. I should like to give a few cardiovascular, physical capacity and motor ability tests, but generally during the season I am too busy making a football or basketball team that will win a few games to study such results, much less give them. Anyway, I seldom worry about whether my back took one or two breaths in making the touchdown, or whether the bipenniform muscles helped more than some others.

In basketball, I like to know the rating of my men in peripheral vision, as every coach does who has seen the winning pass bounce off the right nostril of the forward who "never misses a shot." For this test, I line the men in two rows across the floor, with the players in diagonal positions to the men in the opposite line. I instruct the men to look straight ahead all the time and receive and pass as accurately as possible.

A valuable first day basketball test is the good old game of keep-away, with about ten men on a side. In this test, a coach can diagnose the natural tendencies of his players with respect to the guard and forward positions. He can select the natural "breakers" and can often predict the type of offense best suited to his squad.

Timing ability of my basketball players is tested by scattering part of the squad across the floor as a defensive group, leaving a space of about eight feet on all sides of each man. I then have five men advance the ball as rapidly as possible through the defensive group, each man passing instantly on receiving the ball. The men on defense attempt to break up the passes without moving from their positions on the floor.

Team Tests

For testing the football team as a whole, I have used the familiar procedure of running the team up and down the field, having the players make as many well-executed plays as possible in a measured space of time and each time advancing the ball

twenty yards. This test shows ready knowledge of plays as well as team zip and speed. It also reveals clearly the "half-doers."

Another test is that of halting a half-completed play and instructing the players to remain where the stopping sound caught them until their positions are checked.

In basketball, my most reliable test has been that of placing five men on the floor, two near each basket and one in the center of the floor. Instructions are for the man in the center to pass to one of the men near the basket. The man who receives the ball passes to the other man near him, who shoots and continues shooting until the basket is made. The other player recovers and passes to the center man, who passes to one of the men at the opposite basket, where the same procedure as at the first basket is followed. I time the number of baskets made in three minutes of time. Using the test over a series of years, I have had surprising consistency in the correlation between the test and the result of the following game.

Condition Test

I have tried all common condition tests, using stethoscope, sphygmomanometer, scales, strength and health indexes; but the most consistent and revealing test for me has been the simple heart reaction test, given, as is well known, by taking the pulse rate, giving the subject a certain amount of exercise, recording the rise in pulse rate and then rating the player's condition by the amount of time that passes before the pulse returns to normal.

These tests are given once a week by my embryo coaches and doctors.

Symptom Cards

The most important aid to the coach who wishes to become a good diagnostician is the use of individual and team symptom cards. I am sure that any coach who is willing to take the time and make the effort to keep them will never fail to do so again. To my coaching students, I insist on the use of them as their most important duty.

The plan in brief is merely keeping a day-by-day check on the team and individual players, noting all unusual actions and reactions, both good and bad, and putting them down on the respective cards each day immediately after practice.

My football team card for a day may read like this: "Team better offensively today than defensively. Three fumbles—two on 46 and one on 23. Two long gains started through our defensive left guard. Three passes completed on first team—one in deep center and two in left halfback territory, all on diamond defense. Team seemed to tire a little more than usual during the latter part of practice. Little pep coming into gym. Completed one less well-executed play than usual in three-minute test period."



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On the individual player's card, I put all the information that my managers, friends, trainers and players can give me. I like to feel that I could write a complete biography of each man at the close of the season.

Then, day by day, I check on each player's work as accurately as possible. A basketball player's card may read like this: "Brown, ten minutes late. Looked good in practice game, but loafed in drills. Passed to Gray so much it looked like a habit.

Failed to drive in on several openings for baskets. Passing average, 950; shooting average, 250."

As you may have guessed, my managers do some of the fact finding. One can always find would-be coaches in any high school or college who are more than willing to help.

Many of you may be thinking of the simple tests and believing rightly that you can formulate others at least as good, if not better. If such are your thoughts, I

feel that I have accomplished my main purpose, for tests which are valuable and usable are simple. And every coach of ordinary intelligence can and should develop his own diagnostic procedure and tests.

In summary, I repeat that athletic diagnosing is the key to coaching success. By its use, we can change hopes into plans, imagination into reasoning and a group of players into what is, in our opinion, a five or eleven-jeweled masterpiece.

A Junior High School Basketball

By Edward J. Storey

Mamaroneck, New York, High School

HAVE you ever tried to shoot baskets with a medicine ball? I have. And I had considerable success with the first few shots. But after the first few tries my wrists became tired, and shooting was real work. You probably have had a similar experience.

I am asking you high school coaches this question because you probably have this situation in some of your school physical education work right now. You will raise your brows and ask "Where?" The answer is "Right in your junior high school gymnasium, if you are teaching basketball."

Every modern junior high school conducts a complete system of intramural competition in practically all sports. The aim is to give every boy and girl a chance to play. The sport which seems to be most popular is basketball. It comes at a time of year when many other sports are difficult to carry on. In order to develop intramural basketball teams, intensive teaching in ball handling is necessary.

We used to have a great deal of difficulty in teaching how to shoot free throws, pop-up shots, chest passing, pivoting and dribbling. An analysis of some of these difficulties in teaching disclosed the fact that boys and girls of junior high school age were playing with a ball ill-adapted to them.

We found that the regular varsity basketball was too large and heavy for the hands and strength of these younger athletes. In order to find out what size ball should be provided to adapt this game to junior high boys and girls, we made a thorough study of the mechanics involved in basketball. Assuming that a senior high school varsity athlete could handle the official ball, we found it a simple matter to discover the relationship between senior high and junior high students, in order to develop the junior ball. A study of the grip strength, arm strength and size of hands was made to determine this relationship. From this study, we have developed a ball of such a size that it fits

the average junior high athlete. No longer do boys and girls in our junior high school look as though they were shooting baskets with a medicine ball when they are practicing basketball on the gymnasium floor. The ball fits them and allows them to learn the skills in basketball handling.

The best suggestions we can get from mental hygiene are that we should try to provide situations in which boys and girls can be successful. Success in this activity is obtained through skillful handling of the ball. With a ball of this size, they can learn the various basketball skills, for it is adapted to their age and strength. They can drop a fair percentage of their shots into the basket if they follow instructions. They like the game much better, and we are getting a fine response in our intramural activities.

If you have encountered the same difficulties in teaching younger boys and girls the elementary basketball skills, I am sure you will find that this junior ball will help you as it has helped us.

New Book on Athletic Injuries

READERS of THE ATHLETIC JOURNAL, familiar with the articles of Dr. G. G. Deaver which have appeared in these columns during the past four years, will find valuable a new book, *Safety in Athletics*, which Dr. Deaver has written in collaboration with Dr. Frank S. Lloyd and Dr. Floyd R. Eastwood. All three men are members of the Department of Education of New York University.

Significant is the subtitle of the book, "The Prevention and Treatment of Athletic Injuries." Over half of the book is devoted to an analysis of the causes of accidents and to a presentation of program procedures for reducing the number and severity of accidents in the various sports. The final section, 167 pages, presents methods of treatment.

Typical of the scientific attitude taken by the authors throughout the book is the following paragraph from Part I, which deals with the hazards in the various athletic activities: "Before it is possible to indicate the relative hazardousness of various activities or areas, it is necessary that beyond the number of accidents there be available the number of people participating in these activities in order to obtain the accident incidence. In the high schools, it was found that football accounted for the greatest number of accidents. When this was analyzed on the basis of the number of accidents for every 1000 players, it ranked third, being only half as hazardous as touch football which ranked first. The total number of accidents alone is always a dangerous figure

and leads to much misinterpretation. A true picture can only be obtained as such gross totals are analyzed to show the incidence per 1000."

Organized by sports, Part I of the book gives information on the nature of injuries sustained in each activity, the part of the body injured and the causes of such accidents. It should prove of value to anyone who is concerned with administering, coaching or training in athletics. This section of the book also contains a chapter, "Safety in Summer Camps," of interest to coaches who conduct boys' camps during the summer months.

Administrators will find in Part II of the book suggestions for program procedures which should materially decrease the number and severity of accidents.

Equipment and leadership controls, training and conditioning, first aid and safety consciousness are all covered in this section, which should be read by trainers and coaches as well as school or college officials whose duties are principally administrative.

Based upon the actual conditions which prevail in athletics, Part III is of value primarily to the trainer, or the coach who must of necessity be his own trainer, and secondarily to the administrator who is, in the final analysis, responsible for the first aid and follow-up treatment of injuries in his department. Illustrations and specific directions help to make this section of the book easily understood as well as authoritative.

Rule-making bodies, in addition to coaches and administrators, should find this book useful, as members of these groups are vitally interested in reducing the number of accidents in the various sports.

The book may also serve as a text for courses in physical education or athletics.

Basketball Theory, System and Style

(Continued from page 17)

this maneuver if I had the boys who were proficient at it. I like to see our opponents use it.

I do not believe in the dribble as a means of advancing the ball. It is a splendid addition to basketball maneuvers if used correctly. We cannot dispense with it, and yet many high school boys cannot use it without misusing it. We try to misuse it as little as possible.

I do not believe in vocal basketball. Our boys use their eyes instead of their ears, and save their breath. A shouting offense or defense, to my mind, is an admission of weakness.

I do not believe in the same shooting technique for all players. We have our shooting technique and our methods of developing good shots. However, not all of our players are stylists. Some have undesirable peculiarities from the form angle, but those usually had habits set when they came to us and were good in spite of their peculiarities. My theory is that a basket counts two points, regardless of the way it is made. If a boy is good when he comes to me, I let him alone. If he is not good, I make him shoot the right way. Even if his shooting does not improve, no harm is done, and at least he will not look so bad.

I do not believe in building a team around stars; rather I like to build stars into a team. We seek a machine made up of as nearly perfect units as possible. We do not adjust our players to a style, but I have noticed that when a system is adequate and theories sound there is an ever increasing tendency for that system to pro-

Read Ward "Piggie" Lambert's *Practical Basketball*

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In his book, *Practical Basketball*, Lambert relates in simple yet graphic manner the methods and devices he has used in developing outstanding players and championship teams in high school and college basketball.

Table of Contents of *Practical Basketball*

- Chapter I—Handling the Ball—General Essentials—Types of Passes.
- Chapter II—Offensive Floor Work.
- Chapter III—Basket Shooting—Its Importance—Habits—Types of Shots—Changing Style—Free Throwing.
- Chapter IV—The Dribble—Its Origin and Use—Technique of the Dribble.
- Chapter V—Individual Defense—General (Balance, Stances, Footwork, Mental Alertness)—Guarding a Man with the Ball—Guarding a Man Without the Ball.
- Chapter VI—Team Defense—General Considerations—Man-to-Man Defense—Zone Defense—Checking Five-Man Defense—Fast-Break Defense—Special Defenses—Strategy of Defense.
- Chapter VII—Team Offense—Historical Development—General Essentials—Coaching Advice—Fast-Break (Long Pass, Short Pass Crossing)—Set Formation—Slow-Break (Pass to Forward, Pass to Center, Spread Formation)—Special Offense Against Zone—Various Systems of Offense (Crisscross System, Screening System by Pivots, Three-Man Lane, Side Line Screening System, Long Shot, Continuous Triangle)—Strategy of Offense.
- Chapter VIII—Center Tip Play—Even Control—Control by Opponents—Own Control Absolute.
- Chapter IX—Plays—Out-of-Bounds—Free Throw—Jump Ball.
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The Zone Defense

I do not like a zone defense although we introduced it to Kansas in 1914. Sometimes I like to believe that I originated it, though this probably is not true. At least it was original with me, for I had never seen a zone defense before 1913 when I began experimenting with it. With it we won two state titles and finished second twice in four years. We continued to use it until 1926 and then we were thoroughly cured. That year "Dutch" Clark (of football fame) and his Pueblo High School mates stalled us out of the National Interscholastic Tournament at Chicago when I thought we had what was potentially the best high school team in the country.

Perhaps that is the reason I do not like the zone defense. Even if that is all, it is still too much. However, I feel that a zone may win a majority of games, but it will probably lose the ones we want most to win. The theory behind the zone is wrong. The appeal in basketball to both the players and spectators is action, and, if our players are going to be defeated, I want them to try to do something about it. A helpless fury is generated by the spectacle of the zone defense, chained back in front of its basket, watching a good team sink long shots unmolested. In addition, the zone is no more effective against a good team than the man-for-man, and the man-for-man at least pleases the spectators. We use the same form of attack against a zone as we do against the man-for-man defense, but we slow it down just a little and we usually score on an average just as much. We met a zone defense in our first round of the state tournament last year and won, 38 to 13, but the spectators thought the game was slow. It was. The type of ball necessitated by the zone will soon kill public interest.

Theory, System, Style

We talk of theory, style, system, and often we get the cart before the horse. Sometimes we adopt a style of play and expect this style to carry the burden. As I think of it, style is the fine polishing procedure resulting from a system or imposed upon it, and the system is the whole unified process, much of which consists of methods used to develop boys in the fundamentals. It is the foundation that makes team play possible and the style of play effective. Back of this system are the theories which determine its direction.

Every coach has and should have his own system. Little or none of it may be original with him, but it must be his in the sense that he has made it part of his philosophy. From this background come the methods of developing those theories, and they must tie together with no lost motion or contradictions. We cannot take a piece of one system and a piece of an-

other system and produce results unless those pieces fit together. Our theories must be seen first as a united whole; then we may analyze methods used by us or others and select and fit in such parts as are necessary to further the result we seek.

As an example of this, let us take a theory I have regarding pivoting. Whether correct or not, I believe the left foot is the pivot foot. To explain why would involve considerable discussion. Going a step farther, I believe that it is next to impossible to train high school boys so that they will be equally proficient with either foot, for I have watched too many of these so-called two-footed wonders succeed only in confusing themselves. Consequently, we concentrate on the left foot entirely. This means that our system has had to devise methods that will tie in without contradiction in training players in the technique of starting, stopping, pivoting, passing and taking off on set-ups. You are visualizing, probably, situations wherein the left foot stop and pivot would not be workable, such as at the finish of a dribble to the right side of the court. Well, we do it, and our boys do not get tied up unless they are surrounded. Working out that detail was one of the necessary additions to our system in order that there would be no contradictions of methods in training.

The Newton System

Our system is a product of theories developed over a period of years. It is made up of methods to further those theories. Methods that did not were discarded. Everything we do is done to produce proficiency through constant and unvarying repetition in those fundamental actions which are a part of the game according to those theories. If there is any secret in our success, it lies in a rigid adherence to the above.

Newton has a style of play, but that style was not the potent factor that brought us the title in last year's tournament. Our style succeeded because we had the boys who could and did do the things that made it successful, and those boys did not just happen.

People say around our state that, when a boy is born in Newton, he is given a basketball instead of a rattle. It is true that many of Newton's boys develop at an early age an ambition to make the high school team. Ambition is a very vital factor in athletics and most boys have it in one or more lines. If developing this ambition is not a part of a system, then the system is falling down in that phase. However, our boys do not come to us ready made. Last year's team is rather typical. Two of our five regulars were previously letter men on our junior high school team. The third entered our school from another town in his sophomore year. He had no previous basketball experience. He could not even make our third team when he came in. The

fourth moved in during his junior year from a neighboring city where he was not even a regular on the second team. Last year he was an all-state selection in the tournament. The fifth boy was not good enough to be a squad member until the closing weeks of the basketball season in his junior year.

To have good material is necessary for success. We have been fortunate in that respect, but I have noticed that a good system has much to do with the kind of material it works on. A good system sets up standards, builds traditions and inspires ambition. A good system goes farther. It gives opportunity and direction to that ambition out of which grow certain desired reactions. After a period, it becomes easy to assemble parts.

Our system has had its bad years, years when those parts were a little more defective than usual. Or perhaps it might be better to say years when other teams were a little stronger than usual. We will in the future have some more bad years, but not too bad or too many, I hope. The bad years should serve only to direct attention and concentration on fundamentals and clean out any unnecessary frills we may have acquired. Sometimes a bad year has its purpose.

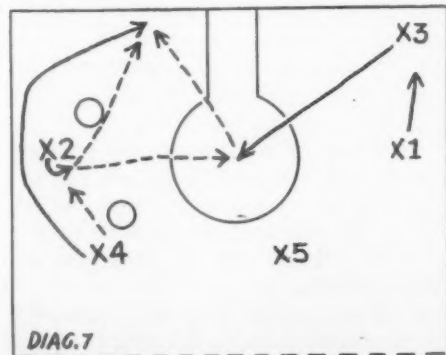
The Springfield Figure 8 Offense

(Continued from page 8)

prefaced with a step or even dribble toward the front defensive line. The line may sometimes be broken and a guard may inject himself into a scoring position. Interception must be guarded against, but the defense should be tempted. Four men should be in the passing that is being done to set the stage for any play; for instance, the two guards, X4 and X5, and the two side line men, X3 and X1, of Diagram 5.

Against the Man-for-Man Defense

We have been able to keep our fundamental pathways and juxtapositions as we have adjusted the system to meet a man-for-man type of play and find that our best screening play is carried through from what we call our weak side pass, shown in Diagram 7, the only alteration is that guard X4 cuts by X2, using him



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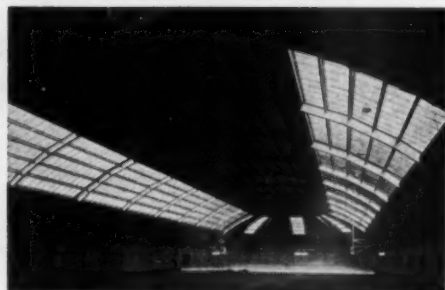
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as a screen, and then receives the ball from X3, who this time has not pivoted back to his own corner but faced X4 throughout the whole play. The pass is from X4 to X2 to X3 to X4.

Drills

The instructional procedure for introducing the pathway work follows natural and easy steps. It is shown in Diagram 8. The men are lined up along the two side lines and move down into the corners as fast as each preceding man cuts out. Two passers are between the free throw circle and the center circle to represent the offensive guards. As these passers, X4 and X5, pass the ball, a runner cuts from the corner, comes to a jump stop as he receives the ball on the free throw line, hesitates, returns the pass and goes on to the rear of the line on the side opposite that from which he came. If the first cutter, X3, receives the ball from X4, then he passes back to X4 and goes on to the opposite side. X4 passes to X5, and with that pass X2, of the left hand line, cuts out to receive the ball from X5. After a jump stop, hesitation and repass to X5, he goes on, and X5 passes to X4. The second man cuts from X3's original line as the ball leaves the hands of X5.

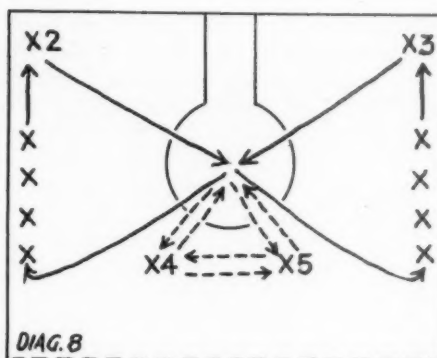
Many rounds of this drill are needed by the players for becoming proficient in timing and the jump stop and becoming figure 8 minded.

The next step is the addition of the pivot after the jump stop. Drill for this is illustrated in Diagram 9. With the slap of his front foot, X3 pushes off for a pivot that produces a half front turn on his back foot in the direction from which the cut was made. He simulates a pass. Then he pivots back to the front again, returns the ball to guard X4 and cuts to the opposite side of the floor. On the pivot, the lifted (advanced) foot should describe an arc of not more than 180 degrees, and the position maintained by the player should be a fairly rugged one, permitting good control of the ball.

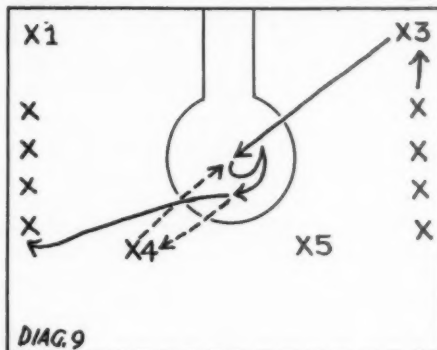
The third step, illustrated in Diagram 10, adds the second man from the cutter's side. He receives the ball as he drives along the end line toward the basket. The timing here is important, and the second cutter, X1, must not hurry the start of the cut. The ball should reach him about two strides from the basket. The pivoting passer, X3, follows in for the rebound, and both players cross to the opposite side.

The fourth step adds the weak side man, who helps with the rebound or may even receive a pass. This puts in the three front court men in proper positions for follow-ups no matter which one shoots. Diagram 4 shows the formation for this drill.

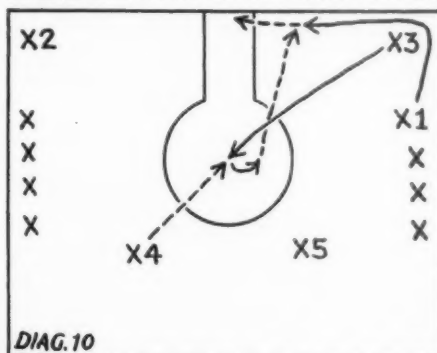
The next drill is practice against defense. This may vary all the way from five chairs through one man to five men.



DIAG. 8



DIAG. 9



DIAG. 10

The five defensive men may be allowed no movement, use of one hand, one step, and the like, up to full movement.

In practice drills, emphasis must be put on the necessity for X1 not cutting for the corner until X3 has cut to the center. Then he should try to get there unnoticed.

Helpful Hints

1. On recovery of the ball after opponents shoot, the center should remain in the back court for one pass before assuming his offensive position, and continue to be the helper to bring the ball up court when necessary.

2. Forwards should get down the floor to their offensive positions immediately upon their team's gaining possession of the ball.

3. Guards should bring the ball down rapidly but carefully unless a fast-break is feasible.

4. When offensive men are in their positions, they should be in them and not edging their way toward the center of the court. By remaining in the corners they provide a threat and worry for the defensive guards.

5. When cutting from the corner, the player should time his cut with the pass-

ing of the ball by the guards. The cut from the right corner starts as the ball leaves the hands of the right guard for a pass across to the left guard.

6. The player "in the hole" should make sure he has the ball before pivoting.

7. If defensive guards do not follow out, the cutter should take a "pop" shot from the "hole."

8. If the cutter can draw a defensive guard out with him, he will be able to pass to a team mate cutting in behind that guard.

9. As soon as the man "in the hole" pivots, his team mates in the corners should cut for the basket.

10. The man "in the hole" should remember to pass out to a guard if he is unable to shoot or pass to a forward or the center.

11. The offense should attempt to keep the defense well spread and the "hole" clear. Each man should stick to the side line until the cut, and then cut with speed.

12. Frequently a second or even a third cutter has a better chance than previous cutters to receive the ball on the cut as defensive men are being pulled out of position by a rapid shift of offensive men.

13. A player should not remain in the "hole" too long. If he does not receive a pass, he should continue out to the side line and allow a team mate to cut in. The three-second rule is no handicap if a proper pivot and follow are used.

14. The pivot used at the free throw line should be long and decisive so that the defensive guard will tend to overrun the cutter and give a chance for a dribble or shot.

15. The pivot is on the rear foot which therefore allows the cutter to have taken a full step forward as he catches the pass from his guard. This tends to pull the defensive guard still farther out of position to leave more room for the pivoter after he has made his turn.

16. It is not good policy for a player to cut from the weak side (one man side).

17. Several advantages of the post pivot play are here obtainable without violation of the three-second rule.

18. The free throw line is the place for players to pivot. Then they should get away from there in a hurry.

19. The side line positions are approximately where the free throw line extended would cut the side line.

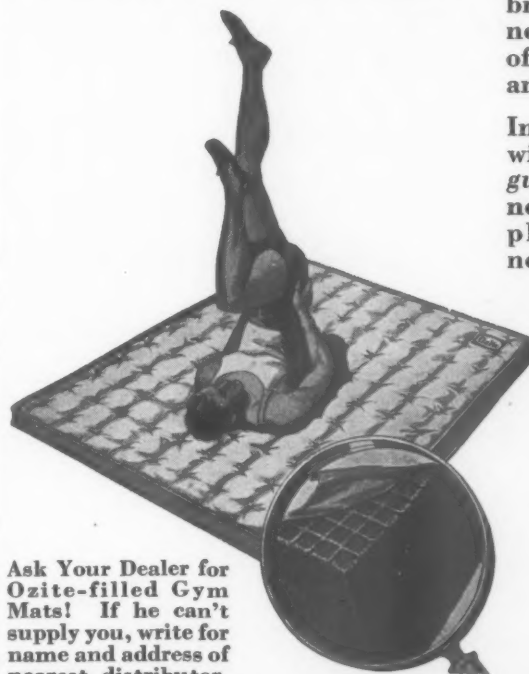
20. The weak side forward moves back and forth along his line in order to keep his guard busy.

21. The second man on the heavy side should move down to the end line just as all eyes are on the ball being passed to the cutter. He should strive to be unobserved.

22. If the cutter does not receive the ball and the second cut is not immediately made, the weak side player should come back out of the corner opposite the free throw line to help in the passing set-up.

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INDEX TO ADVERTISERS

	Page
American Hair & Felt Co.....	39
Arch Roof Construction Co.....	38
Denver Chemical Mfg. Co.....	37
Great Western Athletic Goods Co.	35
Hotel Sherman...Inside Back Cover	
Huntington Laboratories.....	
.....Inside Front Cover	
Kangaroo Leather Association...	33
Lambert's <i>Practical Basketball</i> ...	25
Myrum, G. B.....	37
O'Shea Knitting Mills.....	40
Rawlings Mfg. Co.....Back Cover	
Reach, Wright & Ditson, A. J.....	4
Riddell, Inc., John T.....	36
Simplex Company, The.....	39
Spalding & Bros., A. G.....	3
Wilson Sporting Goods Co.....	1
Witchell-Sheill Co.....	22-23
Wright-DeCoster, Inc.	38

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January, 1937, Page 41

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Vol. XVII, No. 5
January, 1937, Page 43

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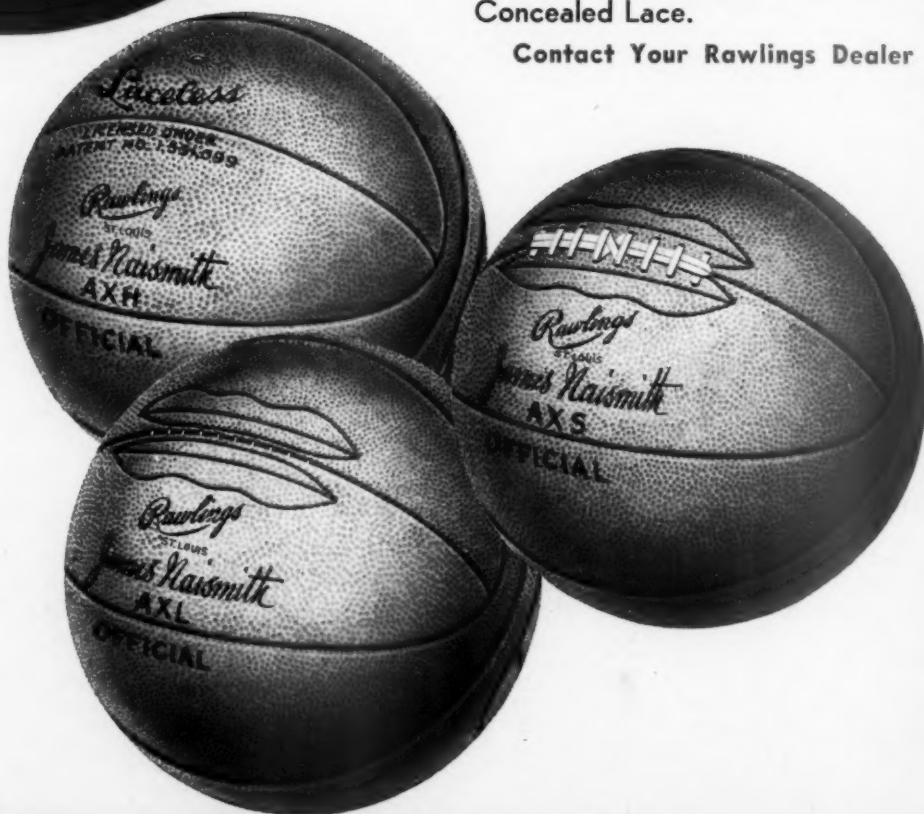
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